THE ACUTE TOXICITY OF INDUSTRIAL EFFLUENTS TO DAPHNIA MAGNA:

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THE ACUTE TOXICITY OF INDUSTRIAL EFFLUENTS TO DAPHNIA MAGNA:

SUMMARY OF 1987 TESTING

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SUMMARY

This report presents, in detail, the results of toxicity tests conducted on industrial effluents collected in the calender year 1987. The testing was accomplished using the invertebrate test organism *Daphnia magna* and following the guidelines outlined in a draft of the *Daphnia magna* Acute Lethality Toxicity Test Protocol (Poirier et al. 1988). The data is reported in two of the formats available within TOXDATA, the Ministry's toxicity relational database system (Lee et al. 1989). The data is presented alphabetically by company name in a shortened summary format in Appendix 1 and in a complete toxicity test report format for each sample in Appendix 2.

Two hundred and twenty seven (227) *Daphnia* toxicity tests were conducted on effluent samples from 49 separate industrial and municipal dischargers. 52.2% of the samples tested were not acutely lethal to *Daphnia* and an additional 15.9% had 48 h LC50s $\geq$ 100% effluent. 24.3% of the effluent samples were acutely lethal to *Daphnia* with 48-h LC50 values < 100%. 7.5% of the tests were invalid due to the advanced age of the samples prior to testing (> 5 days between sampling and testing), or because mortalities in the control solutions exceeded 10%.

SOMMAIRE

Ce rapport donne les détails des résultats obtenus en conduisant des épreuves concernant la toxicité des effluents industriels échantillonnés durant l'année 1987. Ces épreuves furent conduits en se servant de l'invertebre *Daphnia magna* et en suivant les recommendations définies dans le brouillon du document "*Daphnia magna* Acute Lethality Toxicity Test Protocol" (Poirier *et el.* 1988). Les résultats sont presentés en deux formats disponibles dans le TOXDATA, le systeme d'aménagement relationnel d'information toxique du ministere (Lee *et el.* 1989). Les données sont présentées en ordre alphabétique par nom de compagnie dans un sommaire abrégé dans la premiere annexe et en forme complet requis pour le format des rapports d'épreuves toxiques pour chaque donnée dans la deuxième annexe.

Deux cents vingt-sept (227) épreuves concernant la toxicité au *Daphnia* furent conduites avec des échantillons d'effluent prisent de 49 déchargeurs industriels et municipaux. 52.2 p. 100 des épreuves aux échantillons n''ont pas rapportées de la toxicité létale avec le *Daphnia*. En plus, 15.9 p. 100 des échantillons rapportaient une CL50 d'au moins 100 p. 100 d'effluent. 24.3 p. 100 des effluents échantillonnées donnaient une toxicité létale de moins de 100 p. 100 d'effluent pour le *Daphnia* par l'épreuve du CL50 de 48 heures. 7.5 p. 100 des épreuves furent déclarées nulles a cause de l'age avancé des échantillons avant l'épreuve (plus de 5 jours entre le temps de l'échantillonnage et de l'épreuve), ou a cause d'une mortalité de plus de 10 p. 100 pour les temoins.

INTRODUCTION

The Ontario Ministry of the Environment is responsible for maintaining and improving surface water quality in the province. An important part of this work involves monitoring of industrial and municipal discharges. There are two major components of this monitoring - Biological testing which measures the potential effects of effluents on aquatic biota, and chemical testing which measures the possible causes of these effects. Biological tests are necessary parts of this type of monitoring program, and other government jurisdictions such as Sweden, U.S.A. and Germany use them intensively in their surface water management programs. The regional offices in Ontario utilise biological test results for various purposes. Some samples are used to monitor industrial effluents and others primarily to assess spills of toxic chemicals from companies or other sources. Presently Ontario requires most industries discharging to a surface water course to characterize these discharges under the Municipal/Industrial Strategy for Abatement (MISA) program. The chemical parameters measured vary among industrial sectors, but acute lethality tests are an integral part of the characterization for every company.

The Ministry typically uses two different toxicity tests for monitoring of industrial effluents. The 96 hour static acute lethality test with rainbow trout (*Onchorynchus mykiss*) has been used routinely in the Ministry lab since the mid 1970s. Since that time thousands of trout bioassays have been conducted.

No single organism can adequately assess the potential environmental impacts of complex effluents, due to differences in physiology, morphology and behaviour therefore *Daphnia magna* (Straus) was chosen for effluent toxicity testing. *Daphnia magna* is a small (< 5mm) planktonic crustacean which is distributed in ponds and lakes throughout much of the northern hemisphere (Hebert 1978). They are representative of filter-feeding zooplankton communities and are important in the food chain as phytoplanktivores (Hebert 1978; Pennak 1978; Edmondson and Litt 1982; Carpenter et al. 1987) and as a food source for young fish (Scott and Crossman 1979; Evans 1986; Scavia et al. 1986). *Daphnia magna* are easily reared in the laboratory, their biology has been well studied, and there is a significant body of toxicity data on this test species. Daphnids represent a different class of organisms from fish, and as such can provide more information on the toxicity of effluents to aquatic animals.

Daphnids have been used in toxicity testing for over 100 years (APHA 1985), and there are numerous published procedures for conducting toxicity tests with these organisms (ISO 1982; U.S. EPA 1982; APHA 1985; ASTM 1986). The M.O.E. was concerned that these protocols did not sufficiently restrict certain test parameters which have been shown to significantly influence the outcome of toxicity tests with *Daphnia* (Cowgill 1986; 1987). A test procedure must be repeatable within and among laboratories to be used effectively as a regulatory tool, so the Ministry published a standardized toxicity test procedure for *Daphnia magna* (Poirier et al. 1988) to fill this role in Ontario. This procedure specifies test and culture water guidelines, such as diet, dilution water quality parameters and culture practices which are vital to the success of the test. This protocol underwent peer review before publication and is the culmination of several years of experimentation at the Ministry's laboratory in Rexdale. This test procedure was not designed to replace the rainbow trout assay, but as a compliment to it so more information can be generated for each effluent sample examined.

In 1987 *Daphnia magna* and rainbow trout toxicity tests were conducted on effluent samples collected by the Ministry's regional offices from industrial and municipal dischargers in Ontario. The testing followed the procedures outlined in the published Ministry of the Environment protocols with a few omissions. The chemistry parameters required in the *Daphnia* protocol were not measured. This does not invalidate the testing, but does make it more difficult to interpret the possible causes of mortality. It is probable that some of these parameters would be the same as those measured during the rainbow trout toxicity tests conducted on the same samples. The results from these trout toxicity tests are reported separately.

The data presented in this report is a compilation of results from the *Daphnia* toxicity testing in 1987. The data is presented in two formats using the TOXDATA, the Ministry's toxicity database (Lee et al. 1989).

MATERIALS AND METHODS

Samples were collected by regional MOE field officers or by the Aquatic Toxicity Unit from different industrial and municipal dischargers in Ontario. The dischargers, discharge points and dates of sampling were primarily chosen by the regions to support their programs. A minimum of eighty litres of effluent were collected from each discharge point either by grab sampling, or by composite sampling. The samples were shipped to the Rexdale laboratory via air cargo express or refrigerated truck in 20 L buckets lined with clean, food grade, polyethylene bags from which all the air was expelled. In the laboratory the samples were recombined and mixed thoroughly. Two one litre subsamples were taken, placed in clean dark glass bottles and sealed for use in the *Daphnia* acute lethality test. These subsamples were used immediately for testing, or were stored in a refrigerator at 4°C until lab space was available for conducting the tests. If there was more than 4-d between the time of sampling and the beginning of testing, the test was deemed invalid. The remainder of the 80 L sample was used for toxicity testing with rainbow trout, and in some cases for chemical characterization of the effluent.

All toxicity testing with *Daphnia* followed the procedures outlined in a draft copy of the "*Daphnia magna* Acute Lethality Toxicity Test Protocol" (Poirier *et al.* 1988). Poirier *et al.* (1988) describes culture techniques for rearing *Daphnia magna*, as well as a 48 h acute lethality toxicity test for this animal. The test involves making up a series of 5 or more dilutions of the effluent sample (eg. 100, 60, 30, 15, 5, 0%) and then placing 10 or more neonate *Daphnia* in each concentration. The protocol stipulates that the concentration series must contain an undiluted effluent concentration (100%) and a control solution (0%), and the loading density of *Daphnia* must not exceed 1 neonate per 15 ml solution. In our case we place three neonates in 50 ml of test solution in 55 ml borosilicate glass test tubes. The neonates are observed at regular intervals during the test, and at the end of 48 h they are removed and the dead are enumerated. If there are sufficient numbers of dead animals, a 48 h LC50 statistic is calculated with its 95% confidence intervals. This calculation is achieved using a BASIC computer program called "LC50" supplied by M. Harrass of the U.S. Food and Drug Administration (1988). The program uses three methods of calculating the LC50 (probit, least squares and trimmed Spearman-Karber) and allows the operator to choose the results from the method which best suits the data.

All the sample identification information, experimental observations and LC50 statistics were entered into the Ministry's toxicity relational database system called TOXDATA (Lee et al. 1989). This program allows us to enter the diverse types of alphanumeric information generated from a toxicity test, and then print this information out in a variety of formats.

RESULTS

In 1987 227 *Daphnia* toxicity tests were conducted on industrial and municipal effluent samples. The breakdown of the results are as follows:

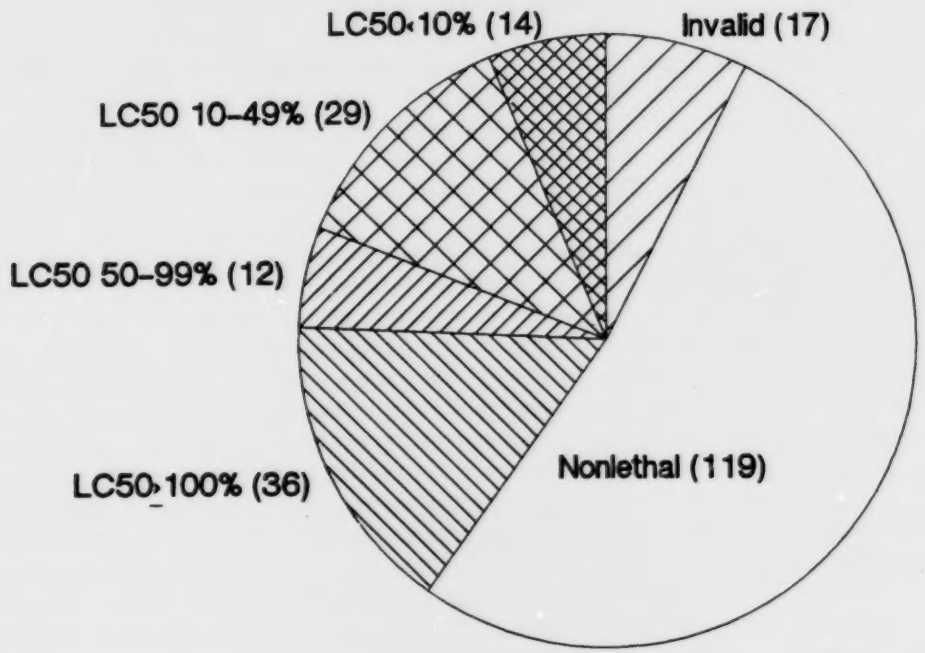

Figure 1: Composition of toxicity data for effluent samples tested in 1987 (n=227).

Samples which are tested more than four days after being sampled, or in which more than 10% of the control animals die are considered invalid tests. Non-lethal samples are those samples in which no animals die in any test concentration, or where the number of animals which die in the test concentration are not significantly different than those dying in the control. The remaining status levels are an arbitrary breakdown of toxic samples into groups with LC50 $\geq$ 100%, LC50 between 50 and 99%, LC50 between 10 and 49%, and LC50 < 10%.

The 1987 sample data is summarized alphabetically by company in Appendix 1. This format is a basic summary which includes only enough information to identify the discharger, discharge site, the sample number, and the basic toxicity results for each sample. There is also a short comment on each of the samples, and a brief summary of the toxicity of the mill discharges in general.

Complete toxicity data for each sample is included in Appendix 2. This "Toxicity Test Report" format includes all the information on the source of the sample, test laboratory, mortality data, measured test parameters, LC50 statistics, and comments. This data is also listed alphabetical by company name.

ACKNOWLEDGEMENTS

We thank the regional Ministry of the Environment employees who coordinated the sampling program, and collected and shipped the effluent samples. We also thank the college co-op and university students for their help in conducting the toxicity tests and caring for the animal cultures.

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Appendix 1: TOXDATA Summary Report format.

1	Company name, location, and (IMIS number)
2	Ministry region in which the company is situated
3	Industrial sector to which the company belongs
4	Discharge point from where the sample was collected
8	Date (mm/dd/yy) when the sample was collected
13	48 h LC50 statistic calculated for this sample
14	95% confidence intervals for the LC50
15	Brief comments about the nature of the sample or test observations
16	Slope of the toxicity curve (if calculable)
19	Descriptive comments on the relative toxicities of samples from different discharge points within the company, trends in toxicity over time, unusual toxic responses, potential causes for toxicity, etc.

COMPANY: 1
(0)
SECTOR: 3
REGION: 2

SUMMARY

4

02900000 sampled: 08/08/08 LC50: 13.0 %
95% fid. limits: 14.0 - 0.0 % slope: 16.0
comments: 15

COMPANY: Abitibi-Price Inc., Smooth Rock Falls
(9000303303)
(now with Malette Kraft Pulp and Paper)
SECTOR: Pulp and Paper Mill
REGION: Northeastern

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample final effluent from Mallette Kraft in Smooth Rock Falls. The sample was mildly toxic to Daphnia, with the test animals exhibiting a bell-shaped response curve - ie. the sample was more toxic in the intermediate concentrations of effluent (eg. 15%, 30% and 60%) after it was diluted with laboratory dilution water. This response has been observed in response to some other industrial discharges and might be caused by chemicals such as ammonia, cyanide and phenol (and some others) which have different toxicities to aquatic animals depending upon water quality conditions (eg. pH, temperature, hardness, alkalinity). As the effluent sample is diluted by laboratory dilution water the water quality parameters could be altered sufficiently to change the toxicity of the sample and create this unusual response curve.

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final effluent

02870099 sampled: 07/14/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Bell-curve lethality

COMPANY: Abitibi-Price Inc./Fort William Div, Thunder Bay (860205)
SECTOR: Pulp and Paper Mill
REGION: Northwestern

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample from the bark lagoon at Abitibi Price in Thunder Bay. This sample was very toxic to Daphnia, with a 48 hour LC50 value of 3.9%. 100% of the test animals were immobilized within two hours of exposure to undiluted effluent.

#2 bark lagoon

bark lagoon

02870129 sampled: 08/19/87 LC50: 3.9 %
95% fid. limits: 2.5 - 6.2 % slope: 2.6
comments:

SCMP sewer

mill effluent

main mill sewer

service water

wood room

main lagoons 1&2

Main sewer # 1

COMPANY: Adam Mines, Timmins
(9946352100)
(now with DOFASCO Ltd. -Adams Mine)
SECTOR: Metal Mining, Smelting, Refining
REGION: Northeastern

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a grab sample of final effluent from Adam Mines in Timmins. This sample was not acutely lethal to Daphnia.

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final

02870084 sampled: 06/30/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

COMPANY: The Algoma Steel Corporation Ltd., Sault Ste. Marie (40006)
SECTOR: Iron and Steel
REGION: Northeastern

SUMMARY

As a Municipal/Industrial Strategy for Abatement pilot site and a Remedial Action Plan site the dischargers along the St. Mary's River in Sault Ste. Marie were intensively studied in 1987. Eighty-three Daphnia toxicity tests were conducted on samples from thirteen discharge or sampling sites at or near The Algoma Steel Corporation Limited. These toxicity tests also included samples from the Root River area and, one sample each from the bar and strip lagoon and Bennett Creek which underwent bench scale treatments to reduce toxicity.

Fifty-nine samples were not acutely lethal to Daphnia magna. Eighteen of the remaining 24 samples were only mildly toxic to Daphnia, with 48 hour LC50 values grater than 100%. The remaining acutely toxic samples were from the 30" blast furnace (1), bar and strip lagoon (2), and East Davignon Creek (3). A few samples from Fort Creek and East Davignon Creek demonstrated an unusual form of toxicity in which the sample was most toxic in the middle concentrations of effluent (eg. 16, 30 or 60% effluent), and was less toxic in its undiluted (100% effluent) form. We suspect this "bell-shaped" lethality curve might be caused by toxicants such as ammonia, cyanide or phenol. These chemicals (and some others) become more or less toxic in response to changing water quality parameters such as temperature, pH, hardness, and alkalinity. By diluting these samples in creating the concentration series'we may be creating the water quality conditions necessary to make these samples toxic. We have observed this response in samples taken from the other steel mills in Ontario, as well as some mine effluents and organic chemical industry waste waters.

Weak Ammonia Stills (in)

Weak Ammonia Stills (out)

Root river

02872102 sampled: 07/17/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Root river at 5th line

02873102 sampled: 07/17/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Canon creek above Root river

02871102 sampled: 07/17/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Root river at highway 17 N.

Slip at site # 1

02871149 sampled: 09/17/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870152 sampled: 09/19/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

Slip at site # 2

02871152 sampled: 09/17/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02872149 sampled: 09/18/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

Slip at site # 3

02873149 sampled: 09/16/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02872152 sampled: 09/17/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

30" B.F. sewer

02870215 sampled: 12/13/87 LC50: 60.3 %
95% fid. limits: 50.8 - 71.5 % slope: 1.9
comments:

tube division

cold mill oil basin

cold mill sewer

Dorr thickener

intake water

terminal basin

02870003 sampled: 01/13/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870012 sampled: 01/28/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: Test started 20 days after sampling

02870026 sampled: 03/10/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02870030 sampled: 03/24/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02870039 sampled: 05/12/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02870054 sampled: 06/03/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: bell-curve lethality

02870083 sampled: 06/30/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02871104 sampled: 07/21/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870123 sampled: 08/17/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02870140 sampled: 09/16/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870207 sampled: 11/25/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870216 sampled: 12/13/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

60" B.F. sewer

02871057 sampled: 06/03/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02870053 sampled: 06/03/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: rapid immobility in higher concentrations

02870074 sampled: 06/24/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870104 sampled: 07/22/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02872119 sampled: 08/11/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870198 sampled: 11/16/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

Coke Plant

Coke Quencher Water

bar & strip mill

02871107 sampled: 07/27/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870107 sampled: 07/27/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: High control mortality

02870149 sampled: 09/16/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

bar and strip lagoon

02870028 sampled: 03/16/87 LC50: 9.5 %
95% fid. limits: 7.4 - 12.2 %
comments: Rapid immobility in higher concentrations

02870038 sampled: 05/12/87 LC50: 32.3 %
95% fid. limits: 17.3 - 48.9 %
comments:

02875058 sampled: 06/09/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Cation exchange treatment

02873058 sampled: 06/09/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Activated Carbon treatment

02871058 sampled: 06/09/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02876058 sampled: 06/09/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Anion exchange treatment

02874058 sampled: 06/09/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Anion and cation exchange treatment

02872058 sampled: 06/09/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: sample filtered prior to testing

02870082 sampled: 06/30/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

The Algoma Steel Corporation Ltd. (continued)

02871123 sampled: 08/17/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: some immobility within 24 hr./recovered by 48

02873145 sampled: 09/16/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: (Site #2)

02870145 sampled: 09/17/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: (site #1A)

02872145 sampled: 09/17/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: (site #2A)

02871145 sampled: 09/17/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: (site #1B)

02871148 sampled: 09/18/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: (site #2)

02870148 sampled: 09/18/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: (site #1)

02870208 sampled: 11/25/87 LC50: 28.4 %
95% fid. limits: 43.9 - 18.3 % slope: 2.6
comments:

East Davignon Creek

02870001 sampled: 01/20/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870008 sampled: 01/21/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02872022 sampled: 02/15/87 LC50: 70.9 %
95% fid. limits: 55.7 - 88.9 % slope: 6.8
comments: 2nd repetition for East Davigon creek

02874022 sampled: 02/20/87 LC50: 63.3 %
95% fid. limits: 52.3 - 78.8 %
comments: Upstream at gate #4

02873022 sampled: 02/20/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Upstream at railway bridge

02871022 sampled: 03/03/87 LC50: 38.6 %
95% fid. limits: 51.3 - 26.6 %
comments: First repetition

02870046 sampled: 05/25/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870073 sampled: 06/24/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02871119 sampled: 08/11/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870160 sampled: 09/29/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870199 sampled: 11/16/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870214 sampled: 12/08/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: bell-curve lethality

Fort Creek

02870029 sampled: 03/16/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: bell curve lethality

02870045 sampled: 05/25/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870066 sampled: 06/16/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02871114 sampled: 08/05/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870156 sampled: 09/23/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02870195 sampled: 11/10/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870213 sampled: 12/08/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: EC50 = 16.2 (8.9 - 23.7)

Bennett Creek

02870031 sampled: 03/24/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02871042 sampled: 05/10/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02876042 sampled: 05/17/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Anion exchange resin treatment

02870042 sampled: 05/18/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Immobility within 24 hrs

02873042 sampled: 05/18/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Activated carbon treatment

02875042 sampled: 05/19/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Anion and cation exchange resin treatment

02874042 sampled: 05/19/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Cation exchange resin treatment

02872042 sampled: 05/19/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Sample filtered before testing

02870065 sampled: 06/17/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02870087 sampled: 07/07/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870114 sampled: 08/05/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870147 sampled: 09/18/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02871156 sampled: 09/23/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870196 sampled: 11/10/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870211 sampled: 12/07/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

BOF cooling water

COMPANY: Beaver Wood Fibre Co. Ltd, Thorold (1620004)
SECTOR: Pulp and Paper Mill
REGION: West Central

SUMMARY

In 1987 two Daphnia toxicity tests were conducted on samples of Final Effluent from Beaver Wood Fibre Co. Ltd in Thorold. One sample was not acutely lethal, but the other sample was toxic to Daphnia with a 48 hour LC50 value between 10% and 30% effluent.

Emergency overflow pond

Beaver Dam Cr. upstream

Beaver Dam Cr. downstream

clarifier

final effluent

02870057 sampled: 06/10/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870068 sampled: 06/19/87 LC50: 17.3 %
95% fid. limits: 0.0 - 0.0 %
comments:

COMPANY: B.F. Goodrich, Thorold (370304)
SECTOR: Organic Chemicals, Synthetic Fibres
REGION: West Central

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a grab sample of final effluent from B.F. Goodrich in Thorold. This sample was not acutely lethal to Daphnia.

---

aerated holding pond

Welland River intake

W.R. intake after clar.

Combined effluent

final effluent

02870078 sampled: 06/26/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

settling pond

polishing lagoon outfall

COMPANY: Boise Cascade Canada Ltd, Fort Frances (870105)
SECTOR: Pulp and Paper Mill
REGION: Northwestern

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a grab sample of Aeration Effluent from Boise Cascade Canada Ltd. in Fort Frances. This sample was toxic to Daphnia with a 48 hour LC50 value of 36.4% effluent.

---

aeration effluent

02870020 sampled: 03/01/87 LC50: 36.4 %
95% fid. limits: 48.7 - 27.1 % slope: 3.9
comments:

paper mill clarifier

Vacuum Pump Seals Water

settling basin effluent

final effluent

Intake

Clarifier

total plant effluent

2 degree influent

Aeration Lagoon Effluent

Aeration Lagoon Influent

K2 aeration lagoon

Kraft Mill Bleaching

COMPANY: Boise Cascade Canada Ltd, Kenora (870006)
SECTOR: Pulp and Paper Mill
REGION: Northwestern

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample of final effluent from Boise Cascade Canada Ltd. in Kenora. This sample was very toxic to Daphnia with a 48 hour LC50 value of 5.5%. 100% of the test animals were immobilized within two hours of exposure to undiluted effluent. Daphnia toxicity tests conducted prior to 1987 had 48 hour LC50 Values between 40% and 100%.

Raw Water

final effluent

02870095 sampled: 07/13/87 LC50: 5.5 %
95% fid. limits: 7.9 - 3.8 % slope: 5.3
comments:

Mg Sulfite

White Water Clarifier

COMPANY: Canadian Industries Ltd., Cornwall
(9000390202)
SECTOR: chemical
REGION: Southeastern

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample of final effluent from Canadian Industries Ltd. in Cornwall. This sample was not acutely lethal to Daphnia.

---

combined effluent

Lel 2 sewer

02870194 sampled: 11/10/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

COMPANY: Canadian Oxy-Durez, Fort Erie
(9833090932)
SECTOR: Organic Chemicals, Synthetic Fibres
REGION: West central

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample of final effluent from Canadian Oxy. Chemicals in Fort Erie. This sample was not acutely lethal to Daphnia.

OT Cooling Water

final effluent

02870077 sampled: 06/26/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

COMPANY: Cornwall Chemicals, Cornwall (9111011019)
SECTOR: chemical
REGION: Southeastern

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample from Manhole #26 at Cornwall Chemicals in Cornwall. This sample was toxic to Daphnia with a 48 hour LC50 value of 74.4% effluent.

---

manhole #26

02870193 sampled: 11/10/87 LC50: 74.4 %
95% fid. limits: 62.3 - 88.8 %
comments:

combined final

COMPANY: Cornwall Municipal, Cornwall (9223454005)
SECTOR: STP
REGION: Southeastern

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample of final effluent from Cornwall Municipal in Cornwall. This sample was very toxic to Daphnia with a 48 hour LC50 value of 0.8% effluent.

---

influent

effluent

02870190 sampled: 11/10/87 LC50: 0.8 %
95% fid. limits: 0.0 - 7.7 % slope: 0.9
comments:

before chlorination

COMPANY: Cyanamid Canada Inc.(Welland plant), Niagara Falls (1550102)
(now with Welland plant)
SECTOR: Inorganic Chemical
REGION: West Central

SUMMARY
In 1987 four Daphnia magna toxicity tests were conducted on samples of effluent from three discharge points at Cyanamid in Niagara Falls. The two samples from the hydro Canal Discharge were invalid due to control mortalities and excessive time between sampling and testing (>5 days). One sample of Weir Effluent had a 48 LC50 of 18 %. One sample from the South Discharge was also toxic with an LC50 of 38.2 %.

---

hydro Canal Discharge

02871105 sampled: 07/27/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: Retested 9 days after collection

02870105 sampled: 07/27/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: High control mortality

Weir Effluent

02870103 sampled: 07/16/87 LC50: 18.0 %
95% fid. limits: 9.2 - 27.4 % slope: 2.5
comments:

South Discharge

02871103 sampled: 07/16/87 LC50: 38.2 %
95% fid. limits: 25.1 - 54.6 % slope: 2.9
comments:

COMPANY: Detour Lake Mine, Timmins (9554621110)
SECTOR: Metal Mining, Smelting, and Refining
REGION: Northeastern

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample of final effluent from Detour Mines in Timmins. This sample was not acutely lethal to Daphnia.

---

final

02870131 sampled: 08/28/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

East Lake

polishing pond

COMPANY: Dome Mines, South Porcupine
(9993471120)
(now with Placer Dome Ltd.)
SECTOR: Metal Mining, Smelting, Refining
REGION: Northeastern

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample of final effluent from Dome Mines in Timmins. This sample was very toxic to Daphnia with a 48 hour LC50 value of 9.8% effluent.

---

final effluent

02870067 sampled: 06/18/87 LC50: 9.8 %
95% fid. limits: 6.5 - 14.9 %
comments: Rapid immobilization in higher concentrations

tailings pond

COMPANY: Domtar Fine Papers Ltd, Cornwall (140301)
SECTOR: Pulp and Paper Mill
REGION: Southeastern

SUMMARY

In 1987 three samples of effluent from three different discharge points at Domtar Fine Papers Ltd. in Cornwall were evaluated for toxicity to Daphnia. Samples of final effluent and from the clarifier were not acutely lethal to Daphnia. The sample from the sewer bypass caused some Daphnia to die in all dilutions during the test.

---

final effluent

02870055 sampled: 06/09/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

sewer bypass

02870191 sampled: 11/10/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

clarifier

02870192 sampled: 11/10/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

COMPANY: Domtar Fine Papers Ltd, St. Catherines (140509)
SECTOR: Pulp and Paper Mill
REGION: West Central

SUMMARY

In 1987 three Daphnia toxicity tests were conducted on samples of final effluent from Domtar Fine Papers Ltd. in St. Catherines. Two samples were not acutely lethal to Daphnia, and the third test was invalid due to high control mortalities.

---

final effluent

02871055 sampled: 09/05/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02871191 sampled: 11/10/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: High control mortality

02870201 sampled: 11/17/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

COMPANY: Domtar Packaging Ltd, Trenton (140608)
SECTOR: Pulp and Paper Mill
REGION: Southeastern

SUMMARY
The final effluent of Domtar Packaging Ltd. in Trenton was sampled intensively in 1987. Eight Daphnia toxicity tests showed the effluent to be highly variable, with test results ranging from non-lethal to very toxic to Daphnia (48 hour LC50 values as low as 5.3% effluent).

---

black liquor

Sulphite Liquor

Digester Drains

Vacuum Pump Seal

Vacuum Pump Seals Overflo

Boiler House

Cooling Water

final effluent

02870035 sampled: 04/30/87 LC50: 5.3 %
95% fid. limits: 3.3 - 8.3 % slope: 2.6
comments: 1, 3, & 10% conc. started 05/08 at 1100 hr.

02870047 sampled: 05/29/87 LC50: 36.4 %
95% fid. limits: 47.7 - 25.1 % slope: 4.3
comments: Immobility in higher conc. within 24 hrs.

02870070 sampled: 06/22/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments:

02870157 sampled: 09/28/87 LC50: 0.0 - 60.0 %
95% fid. limits: 0.0 - 0.0 %
comments: immobility within 24 hr./some recovery in 48

02870203 sampled: 11/17/87 LC50: 57.9 %
95% fid. limits: 46.5 - 71.9 %
comments:

02870303 sampled: 11/19/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02870218 sampled: 12/17/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Many immobile within 24 hr./recovered in 48 h

0287000A sampled: 12/17/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

Economizer Effluent

Economizer Pad Drainage

Economizer Zero

Combined Sample

Process Eff. & Vacuum Sea

Process Effluent

COMPANY: E.B.Eddy Forest Products Ltd, Espanola (980003)
SECTOR: pulp and paper
REGION: Northeastern

SUMMARY

In 1987 two Daphnia toxicity tests were conducted on samples of final effluent from E.B. Eddy Forest Products Ltd. in Espanola. One sample was not acutely lethal to Dahnia, but the other was toxic with a 48 hour LC50 value of 57.0%.

No.1 Bleach Plant

No.2 Bleach Plant

main sewer before lagoon

final effluent

02870019 sampled: 02/02/87 LC50: 57.0 %
95% fid. limits: 40.9 - 80.2 % slope: 3.4
comments:

02870159 sampled: 09/28/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

Intake

wood room

influent

Foam pond

kraft sewer

lime kiln scrubber sump

bleach chlorination stage

paper clarifier

COMPANY: E.B.Eddy Forest Products Ltd, Ottawa (980201)
SECTOR: Pulp and Paper Mill
REGION: Southeastern

SUMMARY

In 1987 three Daphnia toxicity tests were conducted on samples of final effluent from E.B. Eddy Forest Products Ltd. in Ottawa. The toxicity of the discharged effluent was variable with 48 hour LC50 values ranging from >100% to 23.3%.

Board mill sewer

Power canal (intake)

final effluent

02870100 sampled: 07/15/87 LC50: 60.0 - 100.0 %
95% fid. limits: 0.0 - 0.0 %
comments:

02870132 sampled: 08/23/87 LC50: 23.3 %
95% fid. limits: 23.3 - 23.3 %
comments:

02870197 sampled: 11/16/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

Specialty mill(pre clarif

COMPANY: Elmira Sewage Treatment Plant, Elmira (9988776655)
SECTOR: Municipal Sewage Treatment Plant
REGION: West Central

SUMMARY

In 1987 ten samples of final effluent from Elmira Sewage Treatment Plant in Elmira were evaluated for toxicity to Daphnia. This effluent is usually not acutely lethal to Daphnia with eight of ten samples being non-lethal, but during rain events this effluent can be very toxic. On one such occasion the 48 hour LC50 value was 9.6%.

Effluent

Influent|Sewage+Uniroyal

prechlor. combined final

final effluent

02870009 sampled: 01/23/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870037 sampled: 05/06/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02870040 sampled: 05/19/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870049 sampled: 05/27/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02871049 sampled: 06/01/87 LC50: 9.6 %
95% fid. limits: 5.2 - 18.0 %
comments:

02870079 sampled: 06/30/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870117 sampled: 08/06/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

Elmira Sewage Treatment Plant (continued)

02870125 sampled: 08/20/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870209 sampled: 11/26/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870220 sampled: 12/17/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

final clarifier

final effluent(clarifier)

prechlorinated effluent

COMPANY: Esso Petroleum Canada, Sarnia (70102)
SECTOR: Petroleum Refinery
REGION: Southwestern

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample of biox effluent from Esso Petroleum Canada in Sarnia. This sample was not acutely lethal to Daphnia.

Pressure Sewer|Anthracite

Final Effluent

Pressure Sewer

process effluent

biox effluent

02870155 sampled: 09/23/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

COMPANY: Falconbridge/, Sudbury
(9991124046)
SECTOR: mining/metal
REGION: Northeastern

SUMMARY

In 1987 one sample of effluent from the Nir Road discharge site of Falconbridge in Sudbury was evaluated for toxicity to Daphnia. The test was invalid because it was run 34 days after sample collection.

Emery Creek

Fecunis Lk.

Moose creek effl.

Moose Lk.

Nir Rd.

02871193 sampled: 09/16/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: Tested 34 days after collection

COMPANY: Fleet Manufacturing Co. Ltd., Gilmore/Fort Erie (1570001)
SECTOR: Metals, Plastic Fabricating and Finishing
REGION: West Central

SUMMARY

In 1987 two Daphnia toxicity tests were conducted on samples from the East and West Frenchmans Creek discharges. Both samples were not acutely lethal to Daphnia.

---

east Frenchmans Cr. disch

02870120 sampled: 08/13/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

west Frenchmans Cr. disch

02871120 sampled: 08/13/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

COMPANY: Ford Motor Company of Canada Ltd., Windsor (20107)
SECTOR: Metal, Plastic Fabricating and Finishing
REGION: Southwestern

SUMMARY

In 1987 two outfalls and one intake were sampled at Ford Motor Co. in Windsor. The Riverside Drive pump station sample was mildly toxic to Daphnia. Of the two outfalls the company lagoon outfall was mildly toxic and the sewer was not acutely lethal to Daphnia.

Riverside Dr Pump Station

02870101 sampled: 07/17/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

sewer

02871101 sampled: 07/17/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

company lagoon outfall

02872101 sampled: 07/16/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

process eff. after clar.

final discharge

COMPANY: Fraser Inc, Thorold (940007)
SECTOR: Pulp and Paper Mill
REGION: West Central

SUMMARY

In 1987 two samples of final effluent from Frazer Inc. in Thorold were evaluated for toxicity to Daphnia. This effluent was highly variable. One sample was not acutely lethal to Daphnia, yet a second sample produced a 48 hour LC50 value between 1% and 10%. The primary toxicant in this effluent appears to chlorine. Differences in sampling methods, transportation and times before testing could significantly influence the results from toxicity tests due to variable losses of this volatile toxicant.

---

main sewer

S.W.T.P.

#7 sewer

bioxy plant effluent

final effluent

02870064 sampled: 07/16/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870200 sampled: 11/17/87 LC50: 1.0 - 10.0 %
95% fid. limits: 0.0 - 0.0 %
comments:

COMPANY: Great Lakes Forest Products, Dryden (840108)
(now with Canadian Pacific Forest Products)
SECTOR: Pulp and Paper Mill
REGION: Northwestern

SUMMARY

In 1987 three effluent samples from two different sampling points were evaluated for toxicity to Daphnia magna. Untreated samples of final and aeration effluents were mildly toxic to Daphnia. Treatment of the aeration effluent sample with cation and anion exchange resins, or filtration through a millipore membrane rendered the samples non-toxic to Daphnia.

Aeration effluent

02871018 sampled: 03/02/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02872018 sampled: 05/02/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Sample filtered prior to testing

02874072 sampled: 06/21/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Anion / cation exchange resin treatment

02872072 sampled: 06/21/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Anion exchange resin treatment

02873072 sampled: 06/21/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Cation exchange resin treatment

02871072 sampled: 06/22/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: Activated carbon treatment

mill effluent

clean water

final effluent

02870018 sampled: 03/02/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02870072 sampled: 06/21/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: High control mortality

clarifier effluent

clarifier influent

2 degree influent

COMPANY: Inco-, Copper Cliff
(9831038988)
SECTOR: mining\metal
REGION: Northeastern

SUMMARY
In 1987 one Daphnia magna toxicity test was conducted on a sample of Final to Kelly Lake from Inco of Copper Cliff. This test was invalid due to excessive time between sampling and testing (> 5 days).

---

process effluent

02870162 sampled: 09/15/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: Tested 22 days after collection

COMPANY: INCO Metals Ltd., Port Colborne (1600105)
SECTOR: Metal Mining, Smelting and Refining
REGION: West Central

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample of final effluent from INCO Metals Ltd. in Port Colborne. This sample was not acutely lethal to Daphnia.

---

final effluent

02870122 sampled: 08/13/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

COMPANY: Kerr-Addison Mines, Virginiatown
(1350008)
(now with Golden Shield Resources -Kerr Div.)
SECTOR: Metal Mining, Smelting, Refining
REGION: Northeastern

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample of final effluent from Kerr-Addison Mines in Virginiatown. This sample was toxic to Daphnia with an LC50 value of 42.2% effluent.

---

barren pond

tailings decant

final

02870111 sampled: 08/04/87 LC50: 42.2 %
95% fid. limits: 34.3 - 52.2 % slope: 9.2
comments:

COMPANY: Kimberly-Clark Canada Inc., St. Catherines (830208)
SECTOR: Pulp and Paper Mill
REGION: West Central

SUMMARY

In 1987 two samples of final effluent from Kimberly-Clark of Canada in St. Catherines were evaluated for toxicity to Daphnia. Both samples were not acutely lethal to Daphnia.

---

clarifier

final effluent

02870069 sampled: 06/19/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870202 sampled: 11/17/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

COMPANY: Kimberly-Clark of Canada Ltd., Terrace Bay (830000)
SECTOR: Pulp and Paper Mill
REGION: Northwestern

SUMMARY

Jackfish Bay/Kimberly-Clark is another MISA pilot site and was intensively sampled in 1987. Samples of final effluent, and samples taken from station #5 in Blackbird Creek and from the culvert at highway 17 were all toxic to Daphnia with 48 hour LC50 values of 26.2%, 23.3%, and 23.3% effluent respectively. Mostsamples from Moberly Bay were non-lethal. Two samples were invalid tests, one due to high control mortalities and the other because it was tested more than 5 days after sampling.

#1 brown stock

#2 bleach caustic

#2 brown stock

acid outfall

alkaline outfall

last highway crossing

pulp mill effluent

final effluent

02870124 sampled: 08/17/87 LC50: 26.2 %
95% fid. limits: 21.3 - 32.3 %
comments:

final, diluted ~2:1

final, diluted ~4:1

final, neutralized

final, neutralized/dilute

culvert at Hwy. 17

02870081 sampled: 06/29/87 LC50: 23.3 %
95% fid. limits: 23.3 - 23.3 %
comments: Rapid immobilization within 2 hr. > 60% conc.

Moberly Bay (EX-1)

station 702

02876124 sampled: 08/19/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

station 703

02872124 sampled: 08/19/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: Sample tested 20 days after collected

station 706

station 709

02873124 sampled: 08/24/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: High control mortality

station 732

02874124 sampled: 08/24/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

black bird creek sta. 05

02871081 sampled: 07/03/87 LC50: 23.3 %
95% fid. limits: 23.3 - 23.3 %
comments:

02875124 sampled: 08/19/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

COMPANY: Lac Minerals (Macassa Div.), Kirkland Lake (9811123404)
SECTOR: Metal Mining, Smelting, Refining
REGION: Northeastern

SUMMARY

In 1987 two samples of the final effluent were evaluatedfor toxicity to Daphnia. One sample was non-lethal and the other was only mildly toxic to Daphnia.

---

final

02870091 sampled: 07/09/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02870112 sampled: 08/04/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

COMPANY: MacBean Mines, Timmins
(9000002222)
SECTOR: mining/metal
REGION: Northeastern

SUMMARY
In 1987 two samples of tailings effluent were evaluated for toxicity to Daphnia. Both effluents were very toxic to Daphnia with 48 hour LC50 values of 5.0% and 8.0% effluent.

---

tailings overflow

tailings influent

sulphur dioxide reactor

sul.dioxide-air reactor

M.O.E. control point

tailings effluent

02870092 sampled: 07/07/87 LC50: 5.0 %
95% fid. limits: 2.9 - 8.2 % slope: 2.2
comments:

02870113 sampled: 08/04/87 LC50: 8.0 %
95% fid. limits: 5.7 - 11.2 %
comments:

COMPANY: Malette Inc., Smooth Rock Falls
(860502)
(now with Pulp and Power Division)
SECTOR: pulp and paper
REGION: Northeast

SUMMARY
In 1987 one Daphnia magna toxicity test was conducted on a sample of Final Effluent from Malette Kraft Pulp & Paper of Smooth Rock Falls. This sample was acutely lethal with a 48h LC50 of 31.4 %.

---

final

02870098 sampled: 07/14/87 LC50: 31.4 %
95% fid. limits: 39.4 - 25.1 %
comments: Immobility within 3 hr. in 100% conc.

COMPANY: Mcmaster sewer, Welland (9000230000)
SECTOR: combined sewer
REGION: West Central

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample taken from the McMaster Sewer in Welland. This sample was not acutely lethal to Daphnia.

---

sewer

02870121 sampled: 08/13/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

COMPANY: Noranda Mines Ltd. GECO Div., Manitouwadge (1800002)
SECTOR: Metal Mining, Smelting, Refining
REGION: Northwestern

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample of final effluent from Noranda-Geco in Manitouwadge. This sample was very toxic to Daphnia with a 48 hour LC50 value of 1.6% effluent.

---

final effluent

02871050 sampled: 06/01/87 LC50: 1.6 %
95% fid. limits: 0.2 - 14.7 %
comments:

CN Seepage

COMPANY: Northern-Wood Preservers Inc., Thunder Bay (9990012341)
SECTOR: Wood Preserving
REGION: Northwestern

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample of final effluent from Northern Wood Preservers in Thunder Bay. This sample was mildly toxic to Daphnia with a 48 hour LC50 value >100%.

---

final effluent

02870097 sampled: 07/14/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

Kam River at diffu.

COMPANY: Norton Company, Niagara Falls (1650001)
SECTOR: Industrial Minerals
REGION: West Central

SUMMARY

In 1987 four Daphnia toxicity tests were conducted on samples from four different sewers from Norton Company in Niagara Falls. Samples from sewers A and B were not acutely lethal, and samples from sewers C and D were mildly toxic to Daphnia with 48 hour LC50 values >100%.

---

sewer A

02870118 sampled: 08/11/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

sewer B

02871118 sampled: 08/11/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

sewer C

02872118 sampled: 08/11/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

sewer D

02873118 sampled: 08/11/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

sewer A&B

Sewer AB

COMPANY: Pamour Mine, Timmins
(9130968039)
SECTOR: Metal Mining, Smelting, Refining
REGION: Northeastern

SUMMARY

In 1987 two Daphnia toxicity tests were conducted on the same sample of final effluent from Pamour Mine in Timmins. This sample was toxic to Daphnia. The first test produced a 48 hour LC50 of 39.3%. The sample became more toxic the longer it was stored with the LC50 value being 0.5% when tested 2 days after the first.

---

final effluent

02870089 sampled: 07/08/87 LC50: 0.5 %
95% fid. limits: 0.3 - 0.7 % slope: 3.2
comments:

02871089 sampled: 07/08/87 LC50: 39.3 %
95% fid. limits: 25.6 - 57.4 % slope: 2.7
comments:

tailings pond

COMPANY: Polysar Corporation, Sarnia (30007)
SECTOR: chemical
REGION: Southwestern

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample from the D.A.F. (Dissolved Air Floatation) treatment facility at Polysar Corporation in Sarnia. This sample was very toxic to Daphnia with a 48 hour LC50 value between 0.0 and 0.2%.

Service Water

Boat Water

DFE

02870189 sampled: 11/04/87 LC50: 0.0 - 0.2 %
95% fid. limits: 0.0 - 0.0 %
comments:

54" sewer

66" main sewer

72" sewer

biox unit

twnsp. ditch outfall

twnsp. ditch into Polysar

township ditch

Hwy 40 ditch

Styrene II plant effluent

Stereo API separator

Stereo API

COMPANY: Quebec/Ontario Paper Company Ltd., Thorold (930008)
(now with The Ontario Paper Company Ltd.)
SECTOR: Pulp and Paper
REGION: West Central

SUMMARY

In 1987 Daphnia toxicity tests were conducted on two samples of final effluent and two samples from the chemical sewer at Otario Paper Company Ltd. in Thorold. One samples from each of the sampling points was not acutely lethal and the other sample from each sampling site was mildly toxic to Daphnia with 48 hour LC50 values >100%.

---

receiving water

final effluent

02871094 sampled: 07/13/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02870205 sampled: 11/20/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

groundwood white water

chemical sewer

02870056 sampled: 06/10/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870094 sampled: 07/13/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

copeland condensates

Liquor from C.R.P.

COMPANY: Shell Canada, Corunna (510107)
SECTOR: Petroleum Refining
REGION: Southwestern

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample of the total effluent from Shell Canada in Corunna. This sample was not acutely lethal to Daphnia.

Cooling Water

Intake

Process effluent

total effluent

02870154 sampled: 09/23/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

COMPANY: Sohio, Niagara Falls
(1660000)
(now with formerly Canadian Carborundum)
SECTOR: Industrial Minerals
REGION: West Central

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample from the Pell Creek outfall from Sohio in Niagara Falls. This sample was not acutely lethal to Daphnia.

Pell Creek outfall

02870106 sampled: 07/28/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

COMPANY: Spruce Falls Power & Paper Co. Ltd., Kapuskasing (1340009)
SECTOR: Pulp and Paper Mill
REGION: Northeastern

SUMMARY

In 1987 Daphnia toxicity tests were conducted on samples from the main mill and the final effluent. The main mill sample was mildly toxic with a 48 hour LC50 value >100%. The final effluent sample was toxic to Daphnia with a 48 hour LC50 value of 47.3% effluent.

4th stage reject liquor

warmwater intake to TMP

TMP stock liquor

TMP final effluent

TMP chip washer

main mill effluent

02870093 sampled: 07/08/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

process warm water

pulp stock - no bleach

pulp stock - with bleach

red liquor stream

final effluent

02870096 sampled: 07/14/87 LC50: 47.3 %
95% fid. limits: 37.2 - 58.3 % slope: 7.3
comments:

groundwood mill stock liq

COMPANY: St. Mary's Paper Inc., Sault Ste. Marie (860304)
SECTOR: Pulp and Paper Mill
REGION: Northeastern

SUMMARY

As with Algoma Steel Corp., the outfalls and area around St. Mary's Paper in Sault Ste. Marie were intensively sampled in 1987. Eleven samples of Final Effluent and six samples from benthic seepage traps were analized for toxicity to Daphnia. All tests on the Piez samples were invalid because they reached the laboratory more than 5 days after sampling due to transportation problems. Two tests with the final effluent samples were invalid and one sample was mildly toxic with a 48 hour LC50 >100%. 48 hour LC50 values for the remaining 8 samples ranged from 7.8% to 51%.

Piez-47

02870186 sampled: 10/23/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: Tested 26 days after collected

Piez-48

02870185 sampled: 10/23/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: Tested 26 days after collected

Piez-49

02870184 sampled: 10/23/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: Tested 27 days after collected

Piez-50

02870183 sampled: 10/23/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: Tested 26 days after collected

Piez-51

02870181 sampled: 10/23/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: Tested 27 days after collected

Piez-52

02870102 sampled: 10/23/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: Tested 26 days after collected

tailrace,100m.downstream

main sewer

clear water sewer

final effluent

02870004 sampled: 01/14/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: Tested 25 days after collected

02870011 sampled: 01/28/87 LC50: 41.0 %
95% fid. limits: 29.6 - 56.8 %
comments:

02870027 sampled: 03/10/87 LC50: 7.8 %
95% fid. limits: 5.3 - 11.4 %
comments: Immobilization within 4 hr conc. > 30%

02870043 sampled: 05/19/87 LC50: 30.3 %
95% fid. limits: 20.6 - 40.2 % slope: 4.3
comments:

02870059 sampled: 06/09/87 LC50: 28.5 %
95% fid. limits: 21.8 - 37.2 %
comments:

02870063 sampled: 06/15/87 LC50: 24.8 %
95% fid. limits: 0.0 - 100.0 % slope: 3.0
comments:

02871063 sampled: 06/15/87 LC50: 28.5 %
95% fid. limits: 21.9 - 37.2 %
comments:

02870088 sampled: 07/08/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02871108 sampled: 07/27/87 LC50: 51.0 %
95% fid. limits: 38.3 - 65.0 % slope: 5.2
comments:

02870108 sampled: 07/27/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: High control mortality

02870210 sampled: 12/01/87 LC50: 23.2 %
95% fid. limits: 23.2 - 23.2 %
comments:

COMPANY: Suncor-Sunoco Group, Sarnia
(9999512100)
SECTOR: Petroleum Refinery
REGION: Southwestern

SUMMARY
In 1987 Daphnia toxicity tests were conducted on samples from the impounding basin and total effluent from Suncor in Corunna. Both samples were not acutely lethal to Daphnia.

Intake

Cooling Water

Process Water

intake water

Process effluent

Impounding Basin

impounding

02872153 sampled: 09/23/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

total effluent

COMPANY: Teck/Corona Inc., Marathon
(9010000010)
SECTOR: Metal Mining, Smelting, Refining
REGION: Northwestern

SUMMARY

In 1987 one Daphnia toxicity test was conducted on a sample of final effluent from Teck-Corona in Marathon. This sample was toxic to Daphnia with a 48 hour LC50 value of 59.4%.

---

final

02870060 sampled: 06/09/87 LC50: 59.4 %
95% fid. limits: 46.1 - 74.1 % slope: 6.2
comments:

clarifier overflow

Lim Lake outflow

COMPANY: Toronto STP, Toronto
(9339339339)
SECTOR: Municipal Sewage Treatment Plant
REGION: Central

SUMMARY

Toronto STP is part of a MISA pilot site and a RAP site, and as such was intensively sampled in 1987. Eleven samples were evaluated for toxicity to Daphnia. Seven prechlorinated effluent samples were consistently either non-lethal or had 48 hour LC50 values >100% for Daphnia. Final chlorinated effluent samples were variable, with 50% of the samples being non-lethal and the remaining 50% having 48 hour LC50 values of 17.1% and 17.3%.

Chlorinated

02870062 sampled: 06/16/87 LC50: 17.3 %
95% fid. limits: 13.0 - 23.0 % slope: 7.2
comments: 100% mortality in 30% concentration

02870075 sampled: 06/24/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870086 sampled: 07/06/87 LC50: 17.1 %
95% fid. limits: 14.3 - 27.7 % slope: 4.7
comments:

02871115 sampled: 08/05/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

Dechlorinated

sea wall gate

prechlorinated effluent

02870061 sampled: 06/16/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870076 sampled: 06/25/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

Toronto STP (continued)

02870085 sampled: 07/06/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870115 sampled: 08/05/87 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02870163 sampled: 10/06/87 invalid
95% fid. limits: 0.0 - 0.0 %
comments: Sample tested 30 days after collected

02870206 sampled: 11/25/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

final effluent

02870051 sampled: 06/01/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870221 sampled: 12/17/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

end of pipe out in lake

out 30m from end of pipe

fake data

COMPANY: Trent Valley Paperboard Mills, Trenton (1750009)
SECTOR: Pulp and Paper Mill
REGION: Southeastern

SUMMARY

In 1987 Daphnia toxicity tests were conducted on six samples of final effluent from Trent Valley Paperboard Mills in Trenton. All samples were toxicto Daphnia, with 48 hour LC50 values ranging between 0.0% and 61.4% effluent. In all the tests all the test animals were completely immobilized within 3 hours in the undiluted effluent.

---

final effluent

02870036 sampled: 04/30/87 LC50: 7.3 %
95% fid. limits: 4.6 - 11.3 % slope: 2.6
comments:

02870048 sampled: 05/26/87 LC50: 56.9 %
95% fid. limits: 44.1 - 70.7 % slope: 6.3
comments:

02870071 sampled: 06/22/87 LC50: 60.0 %
95% fid. limits: 0.0 - 0.0 %
comments:

02870158 sampled: 09/28/87 LC50: 42.3 %
95% fid. limits: 0.0 - 0.0 %
comments: 100% mortality in 60% concentration

02870204 sampled: 11/18/87 LC50: 61.4 %
95% fid. limits: 49.3 - 76.4 %
comments:

02870000 sampled: 12/17/87 LC50: 0.0 - 10.0 %
95% fid. limits: 0.0 - 0.0 %
comments: Immobilized within 1.5 hr in conc. > 30%

east side effluent

final west side

COMPANY: Waterloo STP, Waterloo (9339339335)
SECTOR: Municipal Sewage Treatment Plant
REGION: West-central

SUMMARY

In 1987 Daphnia toxicity tests were conducted on seven samples of final effluent from Waterloo STP in Waterloo. Six of these samples were not acutely toxic to Daphnia. One sample was toxic to Daphnia with a 48 hour LC50 value of 55.8%. This may have been caused by an overflow situation at the plant due to rainy weather. This result is consistent with a toxic sample collected from the Elmira STP on the same day. These treatment plants are within a few miles of each other and are subject to the similar weather conditions.

---

final effluent

02870002 sampled: 01/13/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870041 sampled: 05/19/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870052 sampled: 06/02/87 LC50: 55.8 %
95% fid. limits: 69.2 - 44.7 % slope: 5.7
comments:

02870080 sampled: 06/30/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870116 sampled: 08/06/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870126 sampled: 08/20/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02870219 sampled: 12/17/87 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

Appendix 2: TOXDATA Toxicity Test Report format.

1	Name of company, and location
2	Ministry region in which company is located
3	Industrial sector
4	Discharge pipe and numerical descriptor
5	Testing Laboratory
6	Method by which sample was collected eg. grab or composite.
7	The name of the individual(s) collecting the sample
8	Date the sample was collected (mm/dd/yy)
9	Date the sample was received in the test lab (mm/dd/yy)
10	Date (mm/dd/yy) and time (24 h clock) the test commenced
12	Mortality data - number of animals responding in each concentration and at each observation period
13	The median lethal concentration statistic calculated from the mortality data (if available)
14	95% lower and upper confidence limits for the LC50
15	Any pertinent comments on the sample or test
16	Slope of mortality curve (if calculated)
17	Method used for calculating LC50
18	pH, dissolved oxygen, conductivity, and temperature measurements for each concentration at each observation period

Ministry of Environment

TOXICITY TEST REPORT Sample: 02900000

TEST CONDITIONS

Company : 1
,
(0)
Region : 2
Industry : 3

Control point : 4, (4)

Laboratory : 5
Sampling Method : 6
Sampled By : 7
Date Collected : 08/08/08
Received : 09/09/09
Tested : 10/10/10 at: 10

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
60	0	0	0	0
30	12	0	12	100
15	0	0	0	0
5	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 13.0 %

95% fid. limits : 14.0 - 0.0 %

Comments : 15

SLOPE of Mortality Curve : 16.0
LC50 Calculated By : 17

TOXICITY TEST PARAMETERS

Sample Number: 02900000

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)			
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)			
30	pH	18.0		18.0
	O2 ppm	18.0		18.0
	Cond.	18		18
	Temp(C)	18.0		18.0
15	pH			
	O2 ppm			
	Cond.			
	Temp(C)			
5	pH			
	O2 ppm			
	Cond.			
	Temp(C)			
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)			

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870099

TEST CONDITIONS

Company : Abitibi-Price Inc.
Smooth Rock Falls, ONT
(9000303303)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/14/87
Received : 07/16/87
Tested : 07/22/87 at: 1330

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	02:00	24:00	48:00	%
100	0	0	4	4	33
60	0	6	7	8	66
30	0	5	5	8	66
10	0	1	4	2	16
3	0	0	0	0	0
1	0	1	0	0	0
Control	0	0	0	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Bell-curve lethality

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870099

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
3	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
1	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870129

TEST CONDITIONS

Company : Abitibi-Price Inc./Fort William Div
Thunder Bay, ONT.
(860205)
Region : Northwestern
Industry : Pulp and Paper Mill

Control point : bark lagoon, (47)

Laboratory : MOE
Sampling Method : 24h composite
Sampled By : C. Koslock
Date Collected : 08/19/87
Received : 08/24/87
Tested : 09/21/87 at: 1410

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	01:00	02:00	24:00	48:00	%
100	0	0	12	12	12	100
30	0	0	3	12	12	100
10	0	0	0	5	12	100
5	0	0	0	1	7	58
1	0	0	1	3	1	8
Control	0	0	0	0	0	0

48 Hour LC50 : 3.9 %

95% fid. limits : 2.5 - 6.2 %

Comments :

SLOPE of Mortality Curve : 2.6
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870129

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	24:00	48:00
100	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
30	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
10	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
5	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
1	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
Control	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870084

TEST CONDITIONS

Company : Adam Mines
Timmins, ONT.
(9946352100)
Region : Northeastern
Industry : Metal Mining, Smelting, Refining

Control point : final, (444)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/30/87
Received : 07/06/87
Tested : 07/07/87 at: 1030

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	03:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	1	1	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870084

TEST CONC.		ELAPSED TIME			
%		00:00	03:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871102

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Root river, (3)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/17/87
Received : 07/18/87
Tested : 08/24/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Root river at highway 17 N.

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871102

TEST CONC.		ELAPSED TIME			
%		00:00	04:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02872102

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Root river, (3)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/17/87
Received : 07/21/87
Tested : 07/27/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	03:00	24:00	48:00	%
100	0	2	0	7	58
60	0	1	0	6	50
30	0	1	0	5	41
10	0	0	0	5	41
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Root river at 5th line

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02872102

TEST CONC. %		ELAPSED TIME 00:00	03:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02873102

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Root river, (3)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/17/87
Received : 07/21/87
Tested : 07/27/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	03:00	24:00	48:00	%
100	0	0	0	3	25
60	0	1	0	5	41
30	0	1	0	4	33
10	0	1	0	1	8
Control	0	2	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Canon creek above Root river

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02873102

TEST CONC.		ELAPSED TIME			
%		00:00	03:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871149

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Slip at site # 1, (10)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/17/87
Received : 09/19/87
Tested : 09/22/87 at: 1530

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY
%				%
100	0	1	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871149

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870152

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Slip at site # 1, (10)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/19/87
Received : 09/21/87
Tested : 09/28/87 at: 1345

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	02:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
60	0	0	0	0	0	0
30	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870152

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	24:00	48:00
100	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
60	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
30	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
10	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
Control	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871152

TEST CONDITIONS

Company	: The Algoma Steel Corporation Ltd. Sault Ste. Marie, ONT. (40006)
Region	: Northeastern
Industry	: Iron and Steel
Control point	: Slip at site # 2, (11)
Laboratory	: MOE
Sampling Method	: grab
Sampled By	: M. Mueller
Date Collected	: 09/17/87
Received	: 09/22/87
Tested	: 09/24/87 at: 1310
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	25:00	49:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871152

TEST CONC. %		ELAPSED TIME 00:00	01:00	25:00	49:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02872149

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Slip at site # 2, (11)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/18/87
Received : 09/19/87
Tested : 09/23/87 at: 1410

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02872149

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02872152

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Slip at site # 3, (12)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/17/87
Received : 09/22/87
Tested : 09/28/87 at: 1510

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02872152

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02873149

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Slip at site # 3, (12)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/16/87
Received : 09/21/87
Tested : 09/24/87 at: 1440

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	02:00	25:30	49:30	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02873149

TEST CONC.		ELAPSED TIME			
%		00:00	02:00	25:30	49:30
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870215

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : 30" B.F. sewer, (18)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. P. Figures
Date Collected : 12/13/87
Received : 12/16/87
Tested : 12/16/87 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	10	12	100
60	0	4	5	41
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 60.3 %

95% fid. limits : 50.8 - 71.5 %

Comments :

SLOPE of Mortality Curve : 1.9
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870215

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 0287000?

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : terminal basin, (534)

Laboratory : MOE
Sampling Method : Grab
Sampled By : Northeastern
Date Collected : 01/13/87
Received : 01/14/87
Tested : 01/29/87 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	03:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
60	0	0	0	0	0	0
30	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870003

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	24:00	48:00
100	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
60	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
30	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
10	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
Control	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870012

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : terminal basin, (534)

Laboratory : MOE
Sampling Method : Grab
Sampled By : Northeastern
Date Collected : 01/28/87
Received : 01/29/87
Tested : 02/09/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	02:00	03:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
60	0	0	0	0	0	0
30	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : Test started 20 days after sampling

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870012

TEST CONC. %		ELAPSED TIME 00:00	02:00	03:00	24:00	48:00
100	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
60	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
30	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
10	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
Control	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870026

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : terminal basin, (534)

Laboratory : MOE
Sampling Method : Grab
Sampled By : Northeastern
Date Collected : 03/10/87
Received : 03/12/87
Tested : 03/12/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	01:10	02:10	04:10	05:10	25:10	49:10	%
100	0	0	0	0	0	6	50
60	0	0	0	0	0	3	25
30	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870026

TEST CONC. %		ELAPSED TIME 01:10	02:10	04:10	05:10	25:10	49:10
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870030

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : terminal basin, (534)

Laboratory : MOE
Sampling Method : grab
Sampled By : J. McGowan
Date Collected : 03/24/87
Received : 03/25/87
Tested : 03/27/87 at: 920

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	03:00	04:00	24:00	48:00	%
100	0	0	0	0	2	2	16
60	0	0	0	0	1	1	8
30	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870030

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870039

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : terminal basin, (534)

Laboratory : MOE
Sampling Method : Grab
Sampled By : J. Mc Gowan
Date Collected : 05/12/87
Received : 05/14/87
Tested : 05/27/87 at: 1001

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	03:00	04:00	24:00	48:00	%
100	0	0	1	1	1	1	8
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870039

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870054

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : terminal basin, (534)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.P. Figures
Date Collected : 06/03/87
Received : 06/05/87
Tested : 06/09/87 at: 1022

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	03:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	2	16
30	0	0	0	0	0	1	8
10	0	0	0	0	0	1	8
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : bell-curve lethality

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870054

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870083

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : terminal basin, (534)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/30/87
Received : 07/06/87
Tested : 07/07/87 at: 1000

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	03:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870083

TEST CONC.		ELAPSED TIME			
%		00:00	03:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871104

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : terminal basin, (534)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/21/87
Received : 07/23/87
Tested : 07/30/87 at: 1030

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
100	0	1	1	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871104

TEST CONC.		ELAPSED TIME			
%		00:00	04:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870123

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : terminal basin, (534)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.P. Figures
Date Collected : 08/17/87
Received : 08/21/87
Tested : 08/24/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	2	16
60	0	0	0	1	8
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870123

TEST CONC.		ELAPSED TIME			
%		00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870140

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : terminal basin, (534)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/16/87
Received : 09/16/87
Tested : 09/17/87 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870140

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870207

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : terminal basin, (534)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.P. Figures
Date Collected : 11/25/87
Received : 11/30/87
Tested : 12/02/87 at: 1315

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870207

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870216

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : terminal basin, (534)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. P. Figures
Date Collected : 12/13/87
Received : 12/16/87
Tested : 12/16/87 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870216

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870053

TEST CONDITIONS

Company	: The Algoma Steel Corporation Ltd. Sault Ste. Marie, ONT. (40006)
Region	: Northeastern
Industry	: Iron and Steel
Control point	: 60" B.F. sewer, (700)
Laboratory	: MOE
Sampling Method	: grab
Sampled By	: M. Figures
Date Collected	: 06/03/87
Received	: 06/05/87
Tested	: 06/09/87 at: 1022
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	03:00	04:00	24:00	48:00	%
100	0	0	3	3	3	3	25
60	0	0	0	0	0	1	8
30	0	0	2	1	1	2	16
10	0	0	0	0	0	2	16
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : rapid immobility in higher concentrations

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870053

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871057

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : 60" B.F. sewer, (700)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.P. Figures
Date Collected : 06/03/87
Received : 06/05/87
Tested : 06/07/87 at: 1022

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	3	25
60	0	0	0	0	0	1	8
30	0	0	0	0	0	2	16
10	0	0	0	0	0	2	16
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871057

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870074

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : 60" B.F. sewer, (700)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/24/87
Received : 06/25/87
Tested : 06/29/87 at: 1315

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	02:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870074

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870104

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : 60" B.F. sewer, (700)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/22/87
Received : 07/23/87
Tested : 07/30/87 at: 1030

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
100	0	0	2	0	0
60	0	1	2	0	0
30	0	0	1	1	8
10	0	0	0	0	0
Control	0	0	0	1	8

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870104

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02872119

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : 60" B.F. sewer, (700)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.P. Figures
Date Collected : 08/11/87
Received : 08/12/87
Tested : 08/18/87 at: 930

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02872119

TEST CONC.		ELAPSED TIME			
%		00:00	04:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870198

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : 60" B.F. sewer, (700)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.P. Figures
Date Collected : 11/16/87
Received : 11/18/87
Tested : 11/19/87 at: 1415

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870198

TEST CONC.		ELAPSED TIME			
%		00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870107

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar & strip mill, (727)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/27/87
Received : 07/29/87
Tested : 07/29/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	3	0	0
60	0	5	0	0
30	0	5	0	0
10	0	5	0	0
Control	0	7	8	66

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : High control mortality

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870107

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871107

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar & strip mill, (727)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/27/87
Received : 07/29/87
Tested : 08/05/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871107

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870149

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar & strip mill, (727)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/16/87
Received : 09/21/87
Tested : 09/28/87 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870149

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870028

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar and strip lagoon, (728)

Laboratory : MOE
Sampling Method : grab
Sampled By : L. McCormack
Date Collected : 03/16/87
Received : 03/18/87
Tested : 03/18/87 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	03:00	04:00	24:00	48:00	%
100	0	2	4	8	12	12	100
60	0	0	0	4	12	12	100
30	0	0	0	0	8	12	100
10	0	0	0	0	2	3	25
Control	0	0	0	0	0	0	0

48 Hour LC50 : 9.5 %

95% fid. limits : 7.4 - 12.2 %

Comments : Rapid immobility in higher concentrations

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02870028

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870038

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar and strip lagoon, (728)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Figures
Date Collected : 05/12/87
Received : 05/14/87
Tested : 05/15/87 at: 1120

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	02:20	03:10	24:10	48:10	%
100	0	0	0	12	12	100
60	0	0	0	5	6	50
30	0	0	0	1	5	41
10	0	0	0	2	6	50
Control	0	0	0	1	1	8

48 Hour LC50 : 32.3 %

95% fid. limits : 17.3 - 48.9 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Moving average

TOXICITY TEST PARAMETERS

Sample Number: 02870038

TEST CONC. %		ELAPSED TIME 00:00	02:20	03:10	24:10	48:10
100	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
60	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
30	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
10	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
Control	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871058

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar and strip lagoon, (728)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/09/87
Received : 06/10/87
Tested : 06/11/87 at: 1150

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	03:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
10	0	0	0	0	1	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871058

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02872058

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar and strip lagoon, (728)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/09/87
Received : 06/10/87
Tested : 06/24/87 at: 1400

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	1	8
60	0	0	0	0	0
30	0	0	1	0	0
10	0	0	0	0	0
Control	0	0	0	1	8

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : sample filtered prior to testing

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02872058

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02873058

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar and strip lagoon, (728)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/09/87
Received : 06/10/87
Tested : 06/24/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	02:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	1	8
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Activated Carbon treatment

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02873058

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02874058

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar and strip lagoon, (728)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/09/87
Received : 06/10/87
Tested : 06/24/87 at: 1330

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	1	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	1	8

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Anion and cation exchange treatment

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02874058

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02875058

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar and strip lagoon, (728)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/09/87
Received : 06/10/87
Tested : 06/24/87 at: 1145

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	02:00	24:00	48:00	%
100	0	0	1	0	0
60	0	0	0	0	0
30	0	0	0	1	8
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Cation exchange treatment

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02875058

TEST CONC.		ELAPSED TIME			
%		00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02876058

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar and strip lagoon, (728)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/09/87
Received : 06/10/87
Tested : 06/24/87 at: 1115

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	02:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	1	8
30	0	0	0	1	8
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Anion exchange treatment

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02876058

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870082

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar and strip lagoon, (728)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/30/87
Received : 07/03/87
Tested : 07/07/87 at: 1000

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	03:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	6	8	66
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	1	1	8
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870082

TEST CONC. %		ELAPSED TIME 00:00	03:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871123

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar and strip lagoon, (728)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.P. Figures
Date Collected : 08/17/87
Received : 08/21/87
Tested : 08/24/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	4	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : some immobility within 24 hr./recovered by 48

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871123

TEST CONC.		ELAPSED TIME			
%		00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02873145

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar and strip lagoon, (728)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/16/87
Received : 09/21/87
Tested : 09/28/87 at: 1530

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY
%				%
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : (Site #2)

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02873145

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870145

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar and strip lagoon, (728)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/17/87
Received : 09/18/87
Tested : 09/19/87 at: 1420

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 01:00	00:00	24:00	48:00	TOTAL MORTALITY
%					%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : (site #1A)

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870145

TEST CONC. %		ELAPSED TIME 01:00	00:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871145

TEST CONDITIONS

Company : The Algoma Steel Corporation ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar and strip lagoon, (728)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/17/87
Received : 09/18/87
Tested : 09/19/87 at: 1110

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0
60	0	0	0	0	0	0
30	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : (site #1B)

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871145

TEST CONC. %		ELAPSED TIME 00:00	02:00	04:00	24:00	48:00
100	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
60	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
30	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
10	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
Control	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02872145

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar and strip lagoon, (728)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/17/87
Received : 09/18/87
Tested : 09/19/87 at: 1110

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	02:00	04:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
60	0	0	0	0	0	0
30	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : (site #2A)

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02872145

TEST CONC. %		ELAPSED TIME 00:00	02:00	04:00	24:00	48:00
100	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
60	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
30	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
10	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
Control	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870148

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar and strip lagoon, (728)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/18/87
Received : 09/19/87
Tested : 09/20/87 at: 1110

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	02:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
60	0	0	0	0	0	0
30	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : (site #1)

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870148

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	24:00	48:00
100	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
60	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
30	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
10	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
Control	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871148

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar and strip lagoon, (728)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/18/87
Received : 09/19/87
Tested : 09/20/87 at: 1145

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	02:00	03:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	1	0	1	1	8
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : (site #2)

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871148

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	03:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870208

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : bar and strip lagoon, (728)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.P. Figures
Date Collected : 11/25/87
Received : 11/26/87
Tested : 11/27/87 at: 1400

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	12	12	100
60	0	0	10	12	100
30	0	0	2	4	33
10	0	0	0	2	16
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 28.4 %

95% fid. limits : 43.9 - 18.3 %

Comments :

SLOPE of Mortality Curve : 2.6
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870208

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
5	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870001

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : East Davignon Creek, (730)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.Burtch
Date Collected : 01/20/87
Received : 02/10/87
Tested : 02/11/87 at: 1000

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870001

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870008

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : East Davignon Creek, (730)

Laboratory : MOE
Sampling Method : grab
Sampled By :
Date Collected : 01/21/87
Received : 02/08/87
Tested : 02/09/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	3	25
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870008

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02872022

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : East Davignon Creek, (730)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 02/15/87
Received : 03/05/87
Tested : 03/10/87 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 11:00	00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	8	10	83
60	0	0	0	0	4	33
30	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

48 Hour LC50 : 70.9 %

95% fid. limits : 55.7 - 88.9 %

Comments : 2nd repetition for East Davigon creek

SLOPE of Mortality Curve : 6.8
LC50 Calculated By : probit

TOXICITY TEST PARAMETERS

Sample Number: 02872022

TEST CONC. %		ELAPSED TIME 11:00	00:00	01:00	24:00	48:00
100	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
60	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
30	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
10	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
Control	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02873022

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : East Davignon Creek, (730)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Burtch
Date Collected : 02/20/87
Received : 03/10/87
Tested : 03/11/87 at: 1000

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Upstream at railway bridge

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02873022

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02874022

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : East Davignon Creek, (730)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Burtch
Date Collected : 02/20/87
Received : 03/10/87
Tested : 03/11/87 at: 1000

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	03:00	04:00	24:00	48:00	%
100	0	3	2	2	9	11	91
60	0	4	4	4	5	5	41
30	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : 63.3 %

95% fid. limits : 52.3 - 78.8 %

Comments : Upstream at gate #4

SLOPE of Mortality Curve :
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02874022

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871022

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : East Davignon Creek, (730)

Laboratory : MOE
Sampling Method : grab
Sampled By :
Date Collected : 03/03/87
Received : 03/05/87
Tested : 03/10/87 at: 0

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 24:00	48:00	TOTAL MORTALITY %
100	7	11	91
60	1	10	83
30	0	4	33
10	0	0	0
Control	0	0	0

48 Hour LC50 : 38.6 %

95% fid. limits : 51.3 - 26.6 %

Comments : First repetition

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02871022

TEST CONC. %		ELAPSED TIME 24:00	48:00
100	pH		
	O2 ppm		
	Cond.		
	Temp(C)	20.0	20.0
60	pH		
	O2 ppm		
	Cond.		
	Temp(C)	20.0	20.0
30	pH		
	O2 ppm		
	Cond.		
	Temp(C)	20.0	20.0
10	pH		
	O2 ppm		
	Cond.		
	Temp(C)	20.0	20.0
Control	pH		
	O2 ppm		
	Cond.		
	Temp(C)	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870046

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : East Davignon Creek, (730)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 05/25/87
Received : 05/26/87
Tested : 05/28/87 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870046

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870073

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : East Davignon Creek, (730)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/24/87
Received : 06/25/87
Tested : 06/29/87 at: 1205

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	02:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	1	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870073

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871119

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : East Davignon Creek, (730)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 08/11/87
Received : 08/12/87
Tested : 08/18/87 at: 930

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	04:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871119

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870160

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : East Davignon Creek, (730)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.P. Figures
Date Collected : 09/29/87
Received : 10/05/87
Tested : 10/14/87 at: 1400

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:30	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870160

TEST CONC. %		ELAPSED TIME 00:00	01:30	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870199

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : East Davignon Creek, (730)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.P. Figures
Date Collected : 11/16/87
Received : 11/18/87
Tested : 11/20/87 at: 1336

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY
%				%
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870199

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870214

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : East Davignon Creek, (730)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Figures
Date Collected : 12/08/87
Received : 12/09/87
Tested : 12/15/87 at: 1333

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	1	8
60	0	0	0	5	41
30	0	0	0	8	66
10	0	0	0	4	33
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : bell-curve lethality

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870214

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870029

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Fort Creek, (735)

Laboratory : MOE
Sampling Method : Grab
Sampled By : L. McCormick
Date Collected : 03/16/87
Received : 03/18/87
Tested : 03/18/87 at: 0

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	03:00	04:00	48:00	96:00	%
100	0	0	0	0	0	1	8
60	0	0	0	0	0	3	25
30	0	0	0	0	0	2	16
10	0	0	0	0	0	2	16
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : bell curve lethality

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870029

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	48:00	96:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870045

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Fort Creek, (735)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 05/25/87
Received : 05/26/87
Tested : 05/28/87 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	1	1	8
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870045

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870066

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Fort Creek, (735)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/16/87
Received : 06/18/87
Tested : 06/22/87 at: 1135

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	01:00	02:00	24:00	48:00	%
100	0	0	0	0	0	0
60	0	0	0	0	0	0
30	0	0	0	1	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870066

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	24:00	48:00
100	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
60	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
30	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
10	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
Control	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871114

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Fort Creek, (735)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.P. Figures
Date Collected : 08/05/87
Received : 08/07/87
Tested : 08/10/87 at: 1015

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	03:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871114

TEST CONC.		ELAPSED TIME			
%		00:00	03:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870156

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Fort Creek, (735)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.P. Figures
Date Collected : 09/23/87
Received : 09/28/87
Tested : 10/05/87 at: 1150

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	01:00	03:00	24:00	48:00	TOTAL MORTALITY
%						%
100	0	0	0	1	2	16
60	0	0	0	0	0	0
30	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870156

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	24:00	48:00
100	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
60	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
30	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
10	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
Control	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870195

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Fort Creek, (735)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.P. Figures
Date Collected : 11/10/87
Received : 11/16/87
Tested : 11/17/87 at: 1415

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY
%				%
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 0287019

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870213

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Fort Creek, (735)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. P. Figures
Date Collected : 12/08/87
Received : 12/09/87
Tested : 12/15/87 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	7	58
60	0	0	0	11	91
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : EC50 = 16.2 (8.9 - 23.7)

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870213

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0		20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0		20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0		20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0		20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0		20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870031

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Bennett Creek, (740)

Laboratory : MOE
Sampling Method : Grab
Sampled By : Northeastern
Date Collected : 03/24/87
Received : 03/25/87
Tested : 03/27/87 at: 900

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	48:00	00:00	01:00	03:00	04:00	24:00	48:00	%
100	3	0	0	0	0	3		25
60	1	0	0	0	0	1		8
30	1	0	0	0	0	1		8
10	0	0	0	0	0	0		0
Control	0	0	0	0	0	0		0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870031

TEST CONC. %		ELAPSED TIME 48:00	00:00	01:00	03:00	04:00	24:00	48:00
100	pH							
	O2 ppm							
	Cond.							
	Temp(C)		20.0	20.0	20.0	20.0	20.0	20.0
60	pH							
	O2 ppm							
	Cond.							
	Temp(C)		20.0	20.0	20.0	20.0	20.0	20.0
30	pH							
	O2 ppm							
	Cond.							
	Temp(C)		20.0	20.0	20.0	20.0	20.0	20.0
10	pH							
	O2 ppm							
	Cond.							
	Temp(C)		20.0	20.0	20.0	20.0	20.0	20.0
Control	pH							
	O2 ppm							
	Cond.							
	Temp(C)		20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871042

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Bennett Creek, (740)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 05/10/87
Received : 05/19/87
Tested : 06/03/87 at: 1400

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	4	6	50
60	0	3	3	25
30	0	3	2	16
10	0	1	3	25
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871042

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02876042

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Bennett Creek, (740)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 05/17/87
Received : 05/19/87
Tested : 06/04/87 at: 1000

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	2	1	1	8
60	0	1	1	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Anion exchange resin treatment

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02876042

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870042

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Bennett Creek, (740)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 05/18/87
Received : 05/19/87
Tested : 06/03/87 at: 1400

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	4	3	25
60	0	2	1	8
30	0	1	3	25
10	0	1	2	16
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Immobility within 24 hrs

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870042

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02873042

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Bennett Creek, (740)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 05/18/87
Received : 05/19/87
Tested : 06/04/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Activated carbon treatment

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02873042

TEST CONC.		ELAPSED TIME			
%		00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02872042

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Bennett Creek, (740)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Figures
Date Collected : 05/19/87
Received : 05/20/87
Tested : 05/26/87 at: 1020

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	1	1	1	8
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
10	0	0	0	1	1	1	8
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Sample filtered before testing

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02872042

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02874042

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Bennett Creek, (740)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 05/19/87
Received : 05/20/87
Tested : 05/21/87 at: 1020

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Cation exchange resin treatment

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02874042

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02875042

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Bennett Creek, (740)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 05/19/87
Received : 05/20/87
Tested : 05/21/87 at: 1020

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Anion and cation exchange resin treatment

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02875042

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870065

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Bennett Creek, (740)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/17/87
Received : 06/18/87
Tested : 06/22/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	3	25
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870065

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870087

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Bennett Creek, (740)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/07/87
Received : 07/08/87
Tested : 07/08/87 at: 1330

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	02:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870087

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870114

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Bennett Creek, (740)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.P. Figures
Date Collected : 08/05/87
Received : 08/07/87
Tested : 08/10/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	02:00	24:00	48:00	TOTAL MORTALITY %
100	0	2	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870114

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870147

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Bennett Creek, (740)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/18/87
Received : 09/19/87
Tested : 09/23/87 at: 1355

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870147

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871156

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Bennett Creek, (740)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 09/23/87
Received : 09/28/87
Tested : 09/29/87 at: 1510

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871156

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870196

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Bennett Creek, (740)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.P. Figures
Date Collected : 11/10/87
Received : 11/16/87
Tested : 11/16/87 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY
%				%
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870196

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870211

TEST CONDITIONS

Company : The Algoma Steel Corporation Ltd.
Sault Ste. Marie, ONT.
(40006)
Region : Northeastern
Industry : Iron and Steel

Control point : Bennett Creek, (740)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.P. Figures
Date Collected : 12/07/87
Received : 12/08/87
Tested : 12/11/87 at: 1430

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870211

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870057

TEST CONDITIONS

Company : Beaver Wood Fibre Co. Ltd
Thorold, ONT.
(1620004)
Region : West Central
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 06/10/87
Received : 06/10/87
Tested : 06/11/87 at: 1400

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	1	1	8
30	0	0	1	1	8
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870057

TEST CONC.		ELAPSED TIME			
%		00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870068

TEST CONDITIONS

Company : Beaver Wood Fibre Co. Ltd
Thorold, ONT.
(1620004)
Region : West Central
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 06/19/87
Received : 06/22/87
Tested : 06/22/87 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	12	100
60	0	0	0	12	100
30	0	0	0	12	100
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 17.3 %

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber alpha =10

TOXICITY TEST PARAMETERS

Sample Number: 02870068

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870078

TEST CONDITIONS

Company : B.F. Goodrich
Thorold, Ont.
(370304)
Region : West Central
Industry : Organic Chemicals, Synthetic Fibres

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 06/26/87
Received : 06/29/87
Tested : 06/29/87 at: 1455

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870078

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870020

TEST CONDITIONS

Company : Boise Cascade Canada Ltd
Fort Frances, ONT.
(870105)
Region : Northwestern
Industry : Pulp and Paper Mill

Control point : aeration effluent, (43)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northwestern
Date Collected : 03/01/87
Received : 03/02/87
Tested : 03/04/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	03:00	04:00	24:00	48:00	%
100	0	0	3	5	12	12	100
60	0	0	0	0	2	9	75
30	0	0	0	0	2	5	41
10	0	0	0	0	1	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : 36.4 %

95% fid. limits : 48.7 - 27.1 %

Comments :

SLOPE of Mortality Curve : 3.9
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870020

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870095

TEST CONDITIONS

Company : Boise Cascade Canada Ltd
Kenora, ONT.
(870006)
Region : Northwestern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northwestern
Date Collected : 07/13/87
Received : 07/14/87
Tested : 07/16/87 at: 1400

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm). :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 24:00	25:00	48:00	72:00	TOTAL MORTALITY %
3	0	0	0	1	8
1	0	0	2	0	0
Control	0	0	0	0	0

48 Hour LC50 : 5.5 %

95% fid. limits : 7.9 - 3.8 %

Comments :

SLOPE of Mortality Curve : 5.3
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870095

TEST CONC. %		ELAPSED TIME 24:00	25:00	48:00	72:00
3	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
1	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870194

TEST CONDITIONS

Company : Canadian Industries Ltd.
Cornwall,
(9000390202)
Region : Southeastern
Industry : chemical

Control point : Lel 2 sewer, (928)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 11/10/87
Received : 11/16/87
Tested : 11/17/87 at: 1145

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870194

TEST CONC. %		ELAPSED TIME 01:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870077

TEST CONDITIONS

Company : Canadian Oxy-Durez
Fort Erie, ONT.
(9833090932)
Region : West central
Industry : Organic Chemicals, Synthetic Fibres

Control point : final effluent, (998)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 06/26/87
Received : 06/26/87
Tested : 06/29/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	03:00	24:00	48:00	TOTAL MORTALITY %
100	0	1	1	0	0
60	0	0	1	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870077

TEST CONC. %		ELAPSED TIME 00:00	03:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870193

TEST CONDITIONS

Company : Cornwall Chemicals
Cornwall,
(9111011019)
Region : Southeastern
Industry : chemical

Control point : manhole #26, (1)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 11/10/87
Received : 11/16/87
Tested : 11/16/87 at: 1410

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	1	6	12	100
60	0	0	0	9	75
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 74.4 %

95% fid. limits : 62.3 - 88.8 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber alpha= 10

TOXICITY TEST PARAMETERS

Sample Number: 02870193

TEST CONC.		ELAPSED TIME			
%		00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870190

TEST CONDITIONS

Company : Cornwall Municipal
Cornwall,
(9223454005)
Region : Southeastern
Industry : STP

Control point : effluent, (3)

Laboratory : MOE
Sampling Method : grab
Sampled By : J. Lee
Date Collected : 11/10/87
Received : 11/12/87
Tested : 11/13/87 at: 1330

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	12	12	100
60	0	11	12	100
30	0	6	10	83
10	0	1	11	91
Control	0	0	0	0

48 Hour LC50 : 0.8 %

95% fid. limits : 0.0 - 7.7 %

Comments :

SLOPE of Mortality Curve : 0.9
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870190

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870105

TEST CONDITIONS

Company : Cyanamid Canada Inc.
Niagara Falls, ONT.
(1550102)
Region : West Central
Industry : Inorganic Chemicals

Control point : hydro canal discharge, (200)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 07/27/87
Received : 07/27/87
Tested : 07/29/87 at: 1115

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY
%				%
100	0	5	8	66
60	0	7	10	83
30	0	11	12	100
10	0	9	12	100
Control	0	5	8	66

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : High control mortality

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870105

TEST CONC.		ELAPSED TIME 00:00	24:00	48:00
%				
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871105

TEST CONDITIONS

Company : Cyanamid Canada Inc.
Niagara Falls, ONT.
(1550102)
Region : West Central
Industry : Inorganic Chemicals

Control point : hydro canal discharge, (200)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 07/27/87
Received : 07/27/87
Tested : 08/05/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : Retested 9 days after collection

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871105

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02872105

TEST CONDITIONS

Company : Cyanamid Canada Inc.
Niagara Falls, ONT.
(1550102)
Region : West Central
Industry : Inorganic Chemicals

Control point : Niagara River discharge, (100)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 07/28/87
Received : 07/28/87
Tested : 07/30/87 at: 900

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	02:00	24:00	48:00	%
100	0	1	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02872105

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870103

TEST CONDITIONS

Company	: Cyanamid Canada Inc. Niagara Falls, ONT. (1550102)
Region	: West Central
Industry	: Inorganic Chemicals
Control point	: weir effluent, (300)
Laboratory	: MOE
Sampling Method	: grab
Sampled By	: M. Mueller
Date Collected	: 07/16/87
Received	: 07/21/87
Tested	: 07/24/87 at: 1100
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	04:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	12	100
60	0	0	0	10	83
30	0	0	0	9	75
10	0	0	0	3	25
3	0	0	0	0	0
1	0	0	0	5	41
Control	0	0	0	0	0

48 Hour LC50 : 18.0 %

95% fid. limits : 9.2 - 27.4 %

Comments :

SLOPE of Mortality Curve : 2.5
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870103

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
3	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
1	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871103

TEST CONDITIONS

Company : Cyanamid Canada Inc.
Niagara Falls, ONT.
(1550102)
Region : West Central
Industry : Inorganic Chemicals

Control point : south discharge, (400)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 07/16/87
Received : 07/21/87
Tested : 07/24/87 at: 1045

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	04:00	24:00	48:00	TOTAL MORTALITY %
100	0	12	12	12	100
60	0	0	0	7	58
30	0	0	0	4	33
10	0	0	0	3	25
Control	0	0	0	2	16

48 Hour LC50 : 38.2 %

95% fid. limits : 25.1 - 54.6 %

Comments :

SLOPE of Mortality Curve : 2.9
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02871103

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870131

TEST CONDITIONS

Company : Detour Lake Mine
Timmins, ONT.
(9554621110)
Region : Northeastern
Industry : Metal Mining, Smelting, and Refining

Control point : final, (444)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 08/28/87
Received : 08/31/87
Tested : 09/21/87 at: 1140

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	02:00	04:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870131

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870055

TEST CONDITIONS

Company : Domtar Fine Papers Ltd
Cornwall, ONT.
(140301)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 06/09/87
Received : 06/10/87
Tested : 06/10/87 at: 1145

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	03:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	1	2	16
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870055

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870191

TEST CONDITIONS

Company : Domtar Fine Papers Ltd
Cornwall, ONT.
(140301)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : sewer bypass, (553)

Laboratory : MOE
Sampling Method : grab
Sampled By :
Date Collected : 11/10/87
Received : 11/10/87
Tested : 11/12/87 at: 1530

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	6	60
60	0	0	5	50
30	0	0	7	70
10	0	0	9	90
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870191

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870192

TEST CONDITIONS

Company : Domtar Fine Papers Ltd
Cornwall, ONT.
(140301)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : clarifier, (554)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 11/10/87
Received : 11/13/87
Tested : 11/16/87 at: 1420

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870192

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871055

TEST CONDITIONS

Company : Domtar Fine Papers Ltd
St. Catherines, ONT.
(140509)
Region : West Central
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/05/87
Received : 09/05/87
Tested : 09/06/87 at: 1145

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	2	16
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871055

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871191

TEST CONDITIONS

Company : Domtar Fine Papers Ltd
St. Catherines, ONT.
(140509)
Region : West Central
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 11/10/87
Received : 11/10/87
Tested : 11/12/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY
%				%
100	0	0	6	50
60	0	0	5	41
30	0	0	9	75
10	0	0	7	58
Control	0	0	5	41

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : High control mortality

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871191

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870201

TEST CONDITIONS

Company : Domtar Fine Papers Ltd
St. Catherines, ONT.
(140509)
Region : West Central
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 11/17/87
Received : 11/19/87
Tested : 11/24/87 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870201

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870035

TEST CONDITIONS

Company : Domtar Packaging Ltd
Trenton, ONT.
(140608)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Southeastern
Date Collected : 04/30/87
Received : 04/30/87
Tested : 05/05/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
%	00:00	01:00	03:00	05:00	24:00	48:00	96:00	%
100	0	0	12	12	12	12	12	100
60	0	0	12	12	12	12	12	100
30	0	0	8	9	12	12	12	100
10	0	0	0	6	8	9	11	91
3	0	0	0	0	2	2	3	25
1	0	0	0	0	2	1	3	25
Control	0	0	0	0	0	0	0	0

48 Hour LC50 : 5.3 %

95% fid. limits : 3.3 - 8.3 %

Comments : 1, 3, & 10% conc. started 05/08 at 1100 hr.

SLOPE of Mortality Curve : 2.6
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870035

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	05:00	24:00	48:00	96:00
100	pH							
	O2 ppm							
	Cond.							
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0	20.0
60	pH							
	O2 ppm							
	Cond.							
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0	20.0
30	pH							
	O2 ppm							
	Cond.							
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0	20.0
10	pH							
	O2 ppm							
	Cond.							
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0	20.0
3	pH							
	O2 ppm							
	Cond.							
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0	20.0
1	pH							
	O2 ppm							
	Cond.							
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH							
	O2 ppm							
	Cond.							
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870047

TEST CONDITIONS

Company : Domtar Packaging Ltd
Trenton, ONT.
(140608)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Southeastern
Date Collected : 05/29/87
Received : 05/29/87
Tested : 06/02/87 at: 1300

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY
%				%
100	0	12	12	100
60	0	6	9	75
30	0	0	5	41
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 36.4 %

95% fid. limits : 47.7 - 25.1 %

Comments : Immobility in higher conc. within 24 hrs.

SLOPE of Mortality Curve : 4.3
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870047

TEST CONC.		ELAPSED TIME 00:00	24:00	48:00
%				
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870070

TEST CONDITIONS

Company : Domtar Packaging Ltd
Trenton, ONT.
(140608)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Southeastern
Date Collected : 06/22/87
Received : 06/22/87
Tested : 06/23/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	00:30	02:00	04:00	24:00	48:00	TOTAL MORTALITY %
100	0	10	4	0	0	2	16
60	0	2	2	0	1	2	16
30	0	0	1	1	1	2	16
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	3	25

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870070

TEST CONC. %		ELAPSED TIME 00:00	00:30	02:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870157

TEST CONDITIONS

Company : Domtar Packaging Ltd
Trenton, ONT.
(140608)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Southeastern
Date Collected : 09/28/87
Received : 09/29/87
Tested : 10/07/87 at: 1430

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY
%				%
100	0	6	12	100
60	0	5	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 0.0 - 60.0 %

95% fid. limits : 0.0 - 0.0 %

Comments : immobility within 24 hr./some recovery in 48

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870157

TEST CONC.		ELAPSED TIME 00:00	24:00	48:00
%				
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870203

TEST CONDITIONS

Company : Domtar Packaging Ltd
Trenton, ONT.
(140608)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : B. Mackie
Date Collected : 11/17/87
Received : 11/24/87
Tested : 11/25/87 at: 1430

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	12	12	100
60	0	0	4	6	50
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 57.9 %

95% fid. limits : 46.5 - 71.9 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02870203

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870303

TEST CONDITIONS

Company : Domtar Packaging Ltd
Trenton, ONT.
(140608)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : B. Mackie
Date Collected : 11/19/87
Received : 11/24/87
Tested : 11/25/87 at: 1430

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	3	25
60	0	0	0	6	50
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870303

TEST CONC.		ELAPSED TIME			
%		00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870218

TEST CONDITIONS

Company : Domtar Packaging Ltd
Trenton, ONT.
(140608)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : R. Holland
Date Collected : 12/17/87
Received : 12/17/87
Tested : 12/20/87 at: 1330

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	12	0	
60	0	12	0	0
30	0	12	0	0
10	0	0	0	0
Control	0	0	0	0
				0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Many immobile within 24 hr./recovered in 48 h

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870218

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 0287000A

TEST CONDITIONS

Company : Domtar Packaging Ltd
Trenton, ONT.
(140608)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : R. Holland
Date Collected : 12/17/87
Received : 12/17/87
Tested : 12/22/87 at: 1330

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 0287000A

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870019

TEST CONDITIONS

Company : E.B.Eddy Forest Products Ltd
Espanola,
(980003)
Region : Northeastern
Industry : pulp and paper

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : D. Sloan
Date Collected : 02/02/87
Received : 02/02/87
Tested : 02/04/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:10	03:10	04:00	24:00	48:00	%
100	0	1	1	0	6	10	83
60	0	0	0	0	4	6	50
30	0	0	0	0	0	2	16
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : 57.0 %

95% fid. limits : 40.9 - 80.2 %

Comments :

SLOPE of Mortality Curve : 3.4
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870019

TEST CONC. %		ELAPSED TIME 00:00	01:10	03:10	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870159

TEST CONDITIONS

Company : E.B.Eddy Forest Products Ltd
Espanola,
(980003)
Region : Northeastern
Industry : pulp and paper

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : D. Sloan
Date Collected : 09/28/87
Received : 09/30/87
Tested : 10/05/87 at: 1425

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:05	25:05	49:05	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870159

TEST CONC. %		ELAPSED TIME 00:00	01:05	25:05	49:05
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870100

TEST CONDITIONS

Company : E.B.Eddy Forest Products Ltd
Ottawa, ONT.
(980201)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Longpre
Date Collected : 07/15/87
Received : 07/16/87
Tested : 07/20/87 at: 1400

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	2	12	100
60	0	0	1	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 60.0 - 100.0 %

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02870100

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870132

TEST CONDITIONS

Company : E.B.Eddy Forest Products Ltd
Ottawa, ONT.
(980201)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Longpre
Date Collected : 08/23/87
Received : 08/26/87
Tested : 09/01/87 at: 1400

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	00:30	24:00	48:00	%
100	0	2	12	12	100
60	0	1	12	12	100
30	0	0	12	12	100
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 23.3 %

95% fid. limits : 23.3 - 23.3 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02870132

TEST CONC.		ELAPSED TIME			
%		00:00	00:30	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870197

TEST CONDITIONS

Company : E.B.Eddy Forest Products Ltd
Ottawa, ONT.
(980201)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Longpre
Date Collected : 11/16/87
Received : 11/17/87
Tested : 11/20/87 at: 1425

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	1	2	16
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870197

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870009

TEST CONDITIONS

Company : Elmira Sewage Treatment Plant
Elmira, ONT.
(9988776655)
Region : West Central
Industry : Municipal Sewage Treatment Plant

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 01/23/87
Received : 01/23/87
Tested : 02/09/87 at: 1330

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	02:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
60	0	0	0	0	0	0
30	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870009

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	24:00	48:00
100	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
60	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
30	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
10	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
Control	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870037

TEST CONDITIONS

Company : Elmira Sewage Treatment Plant
Elmira, ONT.
(9988776655)
Region : West Central
Industry : Municipal Sewage Treatment Plant

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : D.Mackett
Date Collected : 05/06/87
Received : 05/07/87
Tested : 05/08/87 at: 1055

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	02:30	24:00	48:00	%
100	0	0	1	2	16
60	0	0	1	1	8
30	0	0	1	0	0
10	0	0	2	0	0
Control	0	0	0	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870037

TEST CONC. %		ELAPSED TIME 00:00	02:30	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870040

TEST CONDITIONS

Company : Elmira Sewage Treatment Plant
Elmira, ONT.
(9988776655)
Region : West Central
Industry : Municipal Sewage Treatment Plant

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Coutts/Mackett
Date Collected : 05/19/87
Received : 05/19/87
Tested : 05/21/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	02:10	03:00	24:00	48:00	%
100	0	0	0	0	0	0
60	0	0	0	0	0	0
30	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870040

TEST CONC. %		ELAPSED TIME 00:00	02:10	03:00	24:00	48:00
100	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
60	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
30	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
10	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
Control	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870049

TEST CONDITIONS

Company : Elmira Sewage Treatment Plant
Elmira, ONT.
(9988776655)
Region : West Central
Industry : Municipal Sewage Treatment Plant

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 05/27/87
Received : 05/27/87
Tested : 05/29/87 at: 1300

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870049

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871049

TEST CONDITIONS

Company : Elmira Sewage Treatment Plant
Elmira, ONT.
(9988776655)
Region : West Central
Industry : Municipal Sewage Treatment Plant

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 06/01/87
Received : 06/01/87
Tested : 06/02/87 at: 1315

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	12	12	100
60	0	12	12	100
30	0	12	12	100
10	0	2	5	41
Control	0	0	0	0

48 Hour LC50 : 9.6 %

95% fid. limits : 5.2 - 18.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02871049

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870079

TEST CONDITIONS

Company	: Elmira Sewage Treatment Plant Elmira, ONT. (9988776655)
Region	: West Central
Industry	: Municipal Sewage Treatment Plant
Control point	: final effluent, (445)
Laboratory	: MOE
Sampling Method	: grab
Sampled By	: M. Mueller
Date Collected	: 06/30/87
Received	: 07/02/87
Tested	: 07/03/87 at: 1150
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	02:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870079

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870125

TEST CONDITIONS

Company : Elmira Sewage Treatment Plant
Elmira, ONT.
(9988776655)
Region : West Central
Industry : Municipal Sewage Treatment Plant

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M.Coutts
Date Collected : 08/20/87
Received : 08/24/87
Tested : 09/01/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	01:10	24:00	48:00	TOTAL MORTALITY
%					%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870125

TEST CONC. %		ELAPSED TIME 00:00	01:10	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870117

TEST CONDITIONS

Company : Elmira Sewage Treatment Plant
Elmira, ONT.
(9988776655)
Region : West Central
Industry : Municipal Sewage Treatment Plant

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 08/06/87
Received : 08/11/87
Tested : 08/11/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870117

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870209

TEST CONDITIONS

Company : Elmira Sewage Treatment Plant
Elmira, ONT.
(9988776655)
Region : West Central
Industry : Municipal Sewage Treatment Plant

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 11/26/87
Received : 11/30/87
Tested : 12/07/87 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY
%					%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870209

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870220

TEST CONDITIONS

Company : Elmira Sewage Treatment Plant
Elmira, ONT.
(9988776655)
Region : West Central
Industry : Municipal Sewage Treatment Plant

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Coutts
Date Collected : 12/17/87
Received : 12/17/87
Tested : 12/22/87 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:30	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870220

TEST CONC. %		ELAPSED TIME 00:00	01:30	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870155

TEST CONDITIONS

Company : Esso Petroleum Canada
Sarnia, ONT.
(70102)
Region : Southwestern
Industry : Petroleum Refinery

Control point : biox effluent, (999)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/23/87
Received : 09/28/87
Tested : 10/01/87 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY
%				%
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870155

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871193

TEST CONDITIONS

Company : Falconbridge/ Sudbury, ONT. (9991124046)
Region : Northeastern
Industry : mining/metal

Control point : Nir Rd., (962)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 09/16/87
Received : 10/05/87
Tested : 10/20/87 at: 1500

Type of Bioassay : STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : Tested 34 days after collection

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871193

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870120

TEST CONDITIONS

Company : Fleet Manufacturing Co. Ltd.
Gilmore/Fort Erie, ONT.
(1570001)
Region : West Central
Industry : Metals, Plastic Fabricating and Finishing

Control point : east Frenchmans Cr. disch, (100)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 08/13/87
Received : 08/14/87
Tested : 08/18/87 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	02:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870120

TEST CONC.		ELAPSED TIME			
%		00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871120

TEST CONDITIONS

Company : Fleet Manufacturing Co. Ltd.
Gilmore/Fort Erie, ONT.
(1570001)
Region : West Central
Industry : Metals, Plastic Fabricating and Finishing

Control point : west Frenchmans Cr. disch, (150)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 08/13/87
Received : 08/14/87
Tested : 08/18/87 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	02:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871120

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870101

TEST CONDITIONS

Company : Ford Motor Company of Canada Ltd.
Windsor, ONT.
(20107)
Region : Southwestern
Industry : Metal, Plastic Fabricating and Finishing

Control point : Riverside Dr Pump Station, (1)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 07/17/87
Received : 07/20/87
Tested : 07/21/87 at: 945

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	3	25
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870101

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871101

TEST CONDITIONS

Company : Ford Motor Company of Canada Ltd.
Windsor, ONT.
(20107)
Region : Southwestern
Industry : Metal, Plastic Fabricating and Finishing

Control point : sewer, (2)

Laboratory : MOE
Sampling Method : grab
Sampled By : Southwestern
Date Collected : 07/17/87
Received : 07/20/87
Tested : 07/21/87 at: 945

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
100	0	0	0	3	25
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871101

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02872101

TEST CONDITIONS

Company	: Ford Motor Company of Canada Ltd. Windsor, ONT. (20107)
Region	: Southwestern
Industry	: Metal, Plastic Fabricating and Finishing
Control point	: company lagoon outfall, (3)
Laboratory	: MOE
Sampling Method	: grab
Sampled By	:
Date Collected	: 07/16/87
Received	: 07/20/87
Tested	: 07/21/87 at: 945
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	04:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50	: Non-lethal
95% fid. limits	: 0.0 - 0.0 %
Comments	:

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02872101

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870064

TEST CONDITIONS

Company : Fraser Inc
Thorold, ONT.
(940007)
Region : West Central
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 07/16/87
Received : 07/17/87
Tested : 07/17/87 at: 1445

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	1	1	8
30	0	1	0	0
10	0	1	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870064

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870200

TEST CONDITIONS

Company : Fraser Inc
Thorold, ONT.
(940007)
Region : West Central
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : 24h composite
Sampled By : M. Mueller
Date Collected : 11/17/87
Received : 11/19/87
Tested : 11/24/87 at: 1530

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
30	0	12	12	100
10	0	12	12	100
1	0	0	0	0
1	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 1.0 - 10.0 %

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870200

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
1	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
0	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871018

TEST CONDITIONS

Company : Great Lakes Forest Products
Dryden, ONT.
(840108)
Region : Northwestern
Industry : Pulp and Paper Mill

Control point : Aeration effluent, (100)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northwestern
Date Collected : 03/02/87
Received : 03/03/87
Tested : 03/04/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	03:00	04:00	24:00	48:00	%
100	0	3	5	5	4	7	58
60	0	0	2	2	3	3	25
30	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871018

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02872018

TEST CONDITIONS

Company : Great Lakes Forest Products
Dryden, ONT.
(840108)
Region : Northwestern
Industry : Pulp and Paper Mill

Control point : Aeration effluent, (100)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northwestern
Date Collected : 05/02/87
Received : 05/04/87
Tested : 05/05/87 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	03:00	04:00	24:00	48:00	%
100	0	0	0	1	0	1	8
60	0	1	1	1	1	1	8
30	0	0	0	0	1	1	8
10	0	0	0	0	0	1	8
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Sample filtered prior to testing

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02872018

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02872072

TEST CONDITIONS

Company : Great Lakes Forest Products
Dryden, ONT.
(840108)
Region : Northwestern
Industry : Pulp and Paper Mill

Control point : Aeration effluent, (100)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northwestern
Date Collected : 06/21/87
Received : 06/22/87
Tested : 06/24/87 at: 1415

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	1	0	0	0
60	0	0	1	1	8
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Anion exchange resin treatment

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02872072

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02873072

TEST CONDITIONS

Company : Great Lakes Forest Products
Dryden, ONT.
(840108)
Region : Northwestern
Industry : Pulp and Paper Mill

Control point : Aeration effluent, (100)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/21/87
Received : 06/22/87
Tested : 06/24/87 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	1	0	0	0
10	0	0	0	0	0
Control	0	0	6	1	8

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Cation exchange resin treatment

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02873072

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02874072

TEST CONDITIONS

Company : Great Lakes Forest Products
Dryden, ONT.
(840108)
Region : Northwestern
Industry : Pulp and Paper Mill

Control point : Aeration effluent, (100)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northwestern
Date Collected : 06/21/87
Received : 06/22/87
Tested : 06/24/87 at: 1430

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	1	0	1	8
60	0	0	0	0	0
30	0	0	1	1	8
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Anion / cation exchange resin treatment

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02874072

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871072

TEST CONDITIONS

Company : Canadian Pacific Forest Products
Dryden, ONT.
(840108)
Region : Northwestern
Industry : Pulp and Paper Mill

Control point : Aeration effluent, (100)

Laboratory : MOE
Sampling Method : grab
Sampled By. : Northwestern
Date Collected : 06/22/87
Received : 06/23/87
Tested : 06/23/87 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	1	8
60	0	1	0	7	58
30	0	0	0	1	8
10	0	0	0	1	8
Control	0	0	0	4	33

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : Activated carbon treatment

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871072

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870018

TEST CONDITIONS

Company : Great Lakes Forest Products
Dryden, ONT.
(840108)
Region : Northwestern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northwestern
Date Collected : 03/02/87
Received : 03/03/87
Tested : 03/03/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	03:00	04:00	24:00	48:00	%
100	0	0	1	3	2	8	66
60	0	1	1	0	2	2	16
30	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870018

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870072

TEST CONDITIONS

Company	: Great Lakes Forest Products Dryden, ONT. (840108)
Region	: Northwestern
Industry	: Pulp and Paper Mill
Control point	: final effluent, (445)
Laboratory	: MOE
Sampling Method	: grab
Sampled By	: Northwestern
Date Collected	: 06/21/87
Received	: 06/22/87
Tested	: 06/23/87 at: 1430
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	1	0	2	16
60	0	0	0	1	8
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	4	33

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : High control mortality

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870072

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870162

TEST CONDITIONS

Company : Inco
Copper Cliff,
(9831038988)
Region : Northeastern
Industry : mining/metal

Control point : final to Kelly Lk., (483)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 09/15/87
Received : 10/05/87
Tested : 10/07/87 at: 1430

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	8	1	8
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : Tested 22 days after collection

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870162

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870122

TEST CONDITIONS

Company : INCO Metals Ltd.
Port Colborne, ONT.
(1600105)
Region : West Central
Industry : Metal Mining, Smelting and Refining

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 08/13/87
Received : 08/13/87
Tested : 08/18/87 at: 1030

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	03:00	24:00	48:00	%
100	0	0	0	0	0
50	0	0	0	0	0
25	0	0	0	0	0
13	0	0	0	0	0
6	0	0	0	0	0
3	0	0	0	0	0
2	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870122

TEST CONC. %		ELAPSED TIME 00:00	03:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
50	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
25	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
12	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
6	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
3	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
1	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870111

TEST CONDITIONS

Company : Kerr-Addison Mines
Virginiatown, ONT.
(1350008)
Region : Northeastern
Industry : Metal Mining, Smelting, Refining

Control point : final, (444)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 08/04/87
Received : 08/05/87
Tested : 08/06/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	02:00	24:00	48:00	TOTAL MORTALITY
%					%
100	0	0	12	12	100
60	0	0	9	11	91
30	0	0	0	1	8
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 42.2 %

95% fid. limits : 34.3 - 52.2 %

Comments :

SLOPE of Mortality Curve : 9.2
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870111

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0		20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870069

TEST CONDITIONS

Company : Kimberly-Clark Canada Inc.
St. Catherines, ONT.
(830208)
Region : West Central
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 06/19/87
Received : 06/19/87
Tested : 06/23/87 at: 1030

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	03:00	05:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
10	0	0	0	0	1	2	16
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870069

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	05:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870202

TEST CONDITIONS

Company	: Kimberly-Clark Canada Inc. St. Catherines, ONT. (830208)
Region	: West Central
Industry	: Pulp and Paper Mill
Control point	: final effluent, (445)
Laboratory	: MOE
Sampling Method	: 24h composite
Sampled By	: M. Mueller
Date Collected	: 11/17/87
Received	: 11/19/87
Tested	: 11/24/87 at: 1415
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870202

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870067

TEST CONDITIONS

Company : Dome Mines
South Porcupine, ONT.
(9993471120)
Region : Northeastern
Industry : Metal Mining, Smelting, Refining

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/18/87
Received : 06/18/87
Tested : 06/22/87 at: 1140

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	03:00	24:00	48:00	%
100	0	4	7	7	12	12	100
60	0	0	8	12	12	12	100
30	0	0	0	1	10	12	100
10	0	0	0	0	5	6	50
3	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : 9.8 %

95% fid. limits : 6.5 - 14.9 %

Comments : Rapid immobilization in higher concentrations

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02870067

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	03:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
3	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
1	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870124

TEST CONDITIONS

Company : Kimberly-Clark of Canada Ltd.
Terrace Bay, ONT.
(830000)
Region : Northwestern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 08/17/87
Received : 08/24/87
Tested : 08/25/87 at: 1000

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	00:30	24:00	48:00	%
100	0	0	12	12	100
60	0	0	12	12	100
30	0	0	10	10	83
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 26.2 %

95% fid. limits : 21.3 - 32.3 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02870124

TEST CONC.		ELAPSED TIME			
%		00:00	00:30	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870081

TEST CONDITIONS

Company : Kimberly-Clark of Canada Ltd.
Terrace Bay, ONT.
(830000)
Region : Northwestern
Industry : Pulp and Paper Mill

Control point : culvert at Hwy. 17, (676)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/29/87
Received : 07/03/87
Tested : 07/03/87 at: 1135

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	02:00	24:00	48:00	%
100	0	12	12	12	100
60	0	12	12	12	100
30	0	0	0	12	100
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 23.3 %

95% fid. limits : 23.3 - 23.3 %

Comments : Rapid immobilization within 2 hr. > 60% conc.

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02870081

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02876124

TEST CONDITIONS

Company : Kimberly-Clark of Canada Ltd.
Terrace Bay, ONT.
(830000)
Region : Northwestern
Industry : Pulp and Paper Mill

Control point : station 702, (678)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 08/19/87
Received : 08/24/87
Tested : 09/01/87 at: 1145

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:10	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02876124

TEST CONC. %		ELAPSED TIME 00:00	01:10	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02872124

TEST CONDITIONS

Company : Kimberly-Clark of Canada Ltd.
Terrace Bay, ONT.
(830000)
Region : Northwestern
Industry : Pulp and Paper Mill

Control point : station 703, (679)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 08/19/87
Received : 08/20/87
Tested : 09/09/87 at: 1145

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	02:00	04:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
10	0	0	0	0	0	1	8
Control	0	0	0	0	0	10	83

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : Sample tested 20 days after collected

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02872124

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02873124

TEST CONDITIONS

Company : Kimberly-Clark of Canada Ltd.
Terrace Bay, ONT.
(830000)
Region : Northwestern
Industry : Pulp and Paper Mill

Control point : station 709, (681)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 08/24/87
Received : 08/25/87
Tested : 09/09/87 at: 1353

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	01:00	02:00	24:00	48:01	%
100	0	0	0	0	0	0
60	0	0	0	0	0	0
30	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	4	33

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : High control mortality

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02873124

TEST CONC.		ELAPSED TIME				
%		00:00	01:00	02:00	24:00	48:01
100	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
60	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
30	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
10	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
Control	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02874124

TEST CONDITIONS

Company : Kimberly-Clark of Canada Ltd.
Terrace Bay, ONT.
(830000)
Region : Northwestern
Industry : Pulp and Paper Mill

Control point : station 732, (682)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 08/24/87
Received : 08/25/87
Tested : 09/10/87 at: 1440

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	1	1	1	8
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02874124

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871081

TEST CONDITIONS

Company : Kimberly-Clark of Canada Ltd.
Terrace Bay, ONT.
(830000)
Region : Northwestern
Industry : Pulp and Paper Mill

Control point : black bird creek sta. 05, (700)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 07/03/87
Received : 07/03/87
Tested : 07/07/87 at: 1030

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	03:00	24:00	48:00	TOTAL MORTALITY
%					%
100	0	2	12	12	100
60	0	2	7	12	100
30	0	1	12	12	100
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 23.3 %

95% fid. limits : 23.3 - 23.3 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02871081

TEST CONC. %		ELAPSED TIME 00:00	03:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02875124

TEST CONDITIONS

Company	: Kimberly-Clark of Canada Ltd. Terrace Bay, ONT. (830000)
Region	: Northwestern
Industry	: Pulp and Paper Mill
Control point	: black bird creek sta. 05, (700)
Laboratory	: MOE
Sampling Method	: grab
Sampled By	: M. Mueller
Date Collected	: 08/19/87
Received	: 08/24/87
Tested	: 09/11/87 at: 1445
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02875124

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870091

TEST CONDITIONS

Company : Lac Minerals (Macassa Div.)
Kirkland Lake, ONT.
(9811123404)
Region : Northeastern
Industry : Metal Mining, Smelting, Refining

Control point : final, (444)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/09/87
Received : 09/09/87
Tested : 07/13/87 at: 1145

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	02:10	24:00	48:00	%
100	0	0	2	6	50
60	0	0	1	8	66
30	0	0	0	3	25
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870091

TEST CONC. %		ELAPSED TIME 00:00	02:10	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870112

TEST CONDITIONS

Company : Lac Minerals (Macassa Div.)
Kirkland Lake, ONT.
(9811123404)
Region : Northeastern
Industry : Metal Mining, Smelting, Refining

Control point : final, (444)

Laboratory : MOE
Sampling Method : grab
Sampled By : C. Turcotte
Date Collected : 08/04/87
Received : 08/04/87
Tested : 08/06/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	02:00	24:00	48:00	%
100	0	0	0	0	0
60	0	1	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870112

TEST CONC.		ELAPSED TIME			
%		00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870092

TEST CONDITIONS

Company : MacBean Mines
Timmins,
(9000002222)
Region : Northeastern
Industry : mining/metal

Control point : tailings effluent, (977)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/07/87
Received : 07/09/87
Tested : 07/15/87 at: 1430

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:15	24:00	48:00	%
100	0	3	12	12	100
60	0	2	12	12	100
30	0	2	12	12	100
10	0	0	9	7	58
3	0	3	3	6	50
1	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 5.0 %

95% fid. limits : 2.9 - 8.3 %

Comments :

SLOPE of Mortality Curve : 2.2
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870092

TEST CONC. %		ELAPSED TIME 00:00	01:15	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
3	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
1	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870113

TEST CONDITIONS

Company : MacBean Mines
Timmins,
(9000002222)
Region : Northeastern
Industry : mining/metal

Control point : tailings effluent, (977)

Laboratory : MOE
Sampling Method : grab
Sampled By : C. Turcotte
Date Collected : 08/04/87
Received : 08/04/87
Tested : 08/06/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	02:00	24:00	48:00	%
100	0	0	12	12	100
60	0	0	12	12	100
30	0	0	12	12	100
10	0	0	4	9	75
3	0	0	0	0	0
1	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 8.0 %

95% fid. limits : 5.7 - 11.2 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber alpha =10

TOXICITY TEST PARAMETERS

Sample Number: 02870113

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
3	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
1	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870098

TEST CONDITIONS

Company : Malette Kraft Pulp and Paper
Smooth Rock Falls, ONT.
(860502)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : final, (444)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/14/87
Received : 07/16/87
Tested : 07/20/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	03:00	24:00	48:00	TOTAL MORTALITY %
100	0	12	12	12	100
60	0	0	10	12	100
30	0	0	2	3	25
10	0	1	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 31.4 %

95% fid. limits : 39.4 - 25.1 %

Comments : Immobility within 3 hr. in 100% conc.

SLOPE of Mortality Curve :
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870098

TEST CONC. %		ELAPSED TIME 00:00	03:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870121

TEST CONDITIONS

Company : Mcmaster sewer
Welland,
(9000230000)
Region : West Central
Industry : combined sewer

Control point : sewer, (627)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 08/13/87
Received : 08/17/87
Tested : 08/18/87 at: 1330

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	1	8
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870121

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871050

TEST CONDITIONS

Company	: Noranda Mines Ltd. GECO Div. Manitouwadge, ONT. (1800002)
Region	: Northwestern
Industry	: Metal Mining, Smelting, Refining
Control point	: final effluent, (445)
Laboratory	: MOE
Sampling Method	: grab
Sampled By	: Northeastern
Date Collected	: 06/01/87
Received	: 06/10/87
Tested	: 06/02/87 at: 1310
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY
%				%
100	0	12	12	100
60	0	12	12	100
30	0	12	12	100
10	0	5	9	75
Control	0	0	0	0

48 Hour LC50 : 1.6 %

95% fid. limits : 0.2 - 14.7 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02871050

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870097

TEST CONDITIONS

Company : Northern-Wood Preservers Inc.
Thunder Bay, ONT.
(9990012341)
Region : Northwestern
Industry : Wood Preserving

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northwestern
Date Collected : 07/14/87
Received : 07/16/87
Tested : 07/20/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	03:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	2	16
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870097

TEST CONC. %		ELAPSED TIME 00:00	03:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870118

TEST CONDITIONS

Company : Norton Company
Niagara Falls, ONT.
(1650001)
Region : West Central
Industry : Industrial Minerals

Control point : sewer A, (10)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 08/11/87
Received : 08/11/87
Tested : 08/12/87 at: 1030

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	03:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870118

TEST CONC. %		ELAPSED TIME 00:00	03:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871118

TEST CONDITIONS

Company : Norton Company
Niagara Falls, ONT.
(1650001)
Region : West Central
Industry : Industrial Minerals

Control point : sewer B, (20)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 08/11/87
Received : 08/11/87
Tested : 08/12/87 at: 1030

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	03:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871118

TEST CONC. %		ELAPSED TIME 00:00	03:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02872118

TEST CONDITIONS

Company : Norton Company
Niagara Falls, ONT.
(1650001)
Region : West Central
Industry : Industrial Minerals

Control point : sewer C, (30)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 08/11/87
Received : 08/12/87
Tested : 08/12/87 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	5	41
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02872118

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02873118

TEST CONDITIONS

Company	: Norton Company Niagara Falls, ONT. (1650001)
Region	: West Central
Industry	: Industrial Minerals
Control point	: sewer D, (40)
Laboratory	: MOE
Sampling Method	: grab
Sampled By	: M. Mueller
Date Collected	: 08/11/87
Received	: 08/12/87
Tested	: 08/12/87 at: 1430
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TO MORTALITY %
100	0	0	4	33
60	0	0	2	33
30	0	0	1	16
10	0	0	1	8
Control	0	0	0	8 0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02873118

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870089

TEST CONDITIONS

Company : Pamour Mine
Timmins, ONT.
(9130968039)
Region : Northeastern
Industry : Metal Mining, Smelting, Refining

Control point : final effluent, (444)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/08/87
Received : 07/09/87
Tested : 07/15/87 at: 1430

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	02:00	24:00	48:00	TOTAL MORTALITY %
100	0	10	12	12	100
60	0	0	12	12	100
30	0	0	12	12	100
10	0	0	12	12	100
3	0	0	12	12	100
1	0	0	10	10	83
0.[illegible]	0	0	4	4	33
0.[illegible]	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 0.5 %

95% fid. limits : 0.3 - 0.7 %

Comments :

SLOPE of Mortality Curve : 3.2
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870089

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
3	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
1	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
0.[illegible]	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
0.[illegible]	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871089

TEST CONDITIONS

Company : Pamour Mine
Timmins, ONT.
(9130968039)
Region : Northeastern
Industry : Metal Mining, Smelting, Refining

Control point : final effluent, (444)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/08/87
Received : 07/08/87
Tested : 07/13/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	02:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	7	11	91
60	0	0	4	6	50
30	0	0	3	7	58
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 39.3 %

95% fid. limits : 25.6 - 57.4 %

Comments :

SLOPE of Mortality Curve : 2.7
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02871089

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870189

TEST CONDITIONS

Company : Polysar Corporation
Sarnia,
(30007)
Region : Southwestern
Industry : chemical

Control point : DFE, (3)

Laboratory : MOE
Sampling Method : grab
Sampled By : J. Lee
Date Collected : 11/04/87
Received : 11/04/87
Tested : 11/12/87 at: 1300

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:30	24:00	48:00	TOTAL MORTALITY %
2	0	0	0	12	100
1	0	0	0	12	100
1	0	0	0	12	100
0	0	0	0	12	100
Control	0	0	0	0	0

48 Hour LC50 : 0.0 - 0.2 %

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870189

TEST CONC. %		ELAPSED TIME 00:00	01:30	24:00	48:00
2	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
1	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
0	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
0	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871094

TEST CONDITIONS

Company : Quebec/Ontario Paper Company Ltd.
Thorold, ONT.
(930008)
Region : West Central
Industry : Pulp and Paper

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 07/13/87
Received : 07/13/87
Tested : 07/16/87 at: 1400

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity .
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	02:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	4	33
60	0	2	1	3	25
30	0	1	2	4	33
10	0	0	1	2	16
3	0	0	0	1	8
1	0	0	1	0	0
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871094

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
3	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
1	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870205

TEST CONDITIONS

Company : Quebec/Ontario Paper Company Ltd.
Thorold, ONT.
(930008)
Region : West Central
Industry : Pulp and Paper

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 11/20/87
Received : 11/24/87
Tested : 11/25/87 at: 1345

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	1	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870205

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870056

TEST CONDITIONS

Company : Quebec/Ontario Paper Company Ltd.
Thorold, ONT.
(930008)
Region : West Central
Industry : Pulp and Paper

Control point : chemical sewer, (745)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 06/10/87
Received : 06/10/87
Tested : 06/11/87 at: 1415

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	1	1	0	0
60	0	0	0	0	0
30	0	0	1	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870056

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870094

TEST CONDITIONS

Company : Quebec/Ontario Paper Company Ltd.
Thorold, ONT.
(930008)
Region : West Central
Industry : Pulp and Paper

Control point : chemical sewer, (745)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 07/13/87
Received : 07/13/87
Tested : 07/14/87 at: 1140

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	02:00	24:00	48:00	%
100	0	0	12	4	33
60	0	0	6	3	25
30	0	0	2	2	16
10	0	0	0	0	0
Control	0	0	0	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870094

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870154

TEST CONDITIONS

Company : Shell Canada
Corunna, ONT.
(510107)
Region : Southwestern
Industry : Petroleum Refining

Control point : total effluent, (800)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/23/87
Received : 09/28/87
Tested : 10/01/87 at: 1530

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870154

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870106

TEST CONDITIONS

Company : Sohio
Niagara Falls, ONT.
(1660000)
Region : West Central
Industry : Industrial Minerals

Control point : Pell Creek outfall, (100)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 07/28/87
Received : 07/28/87
Tested : 07/30/87 at: 900

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	02:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870106

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870093

TEST CONDITIONS

Company : Spruce Falls Power & Paper Co. Ltd.
Kapuskasing, ONT.
(1340009)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : main mill effluent, (200)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/08/87
Received : 07/15/87
Tested : 07/15/87 at: 1000

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	1	0	6	50
60	0	0	1	0	0
30	0	1	2	1	8
10	0	0	0	1	8
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870093

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870096

TEST CONDITIONS

Company : Spruce Falls Power & Paper Co. Ltd.
Kapuskasing, ONT.
(1340009)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/14/87
Received : 07/16/87
Tested : 07/20/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	04:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	6	12	100
60	0	0	6	9	75
30	0	0	1	1	8
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 47.3 %

95% fid. limits : 37.2 - 58.3 %

Comments :

SLOPE of Mortality Curve : 7.3
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870096

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870186

TEST CONDITIONS

Company : St. Mary's Paper Inc.
Sault Ste. Marie, ONT.
(860304)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : Piez-47, (47)

Laboratory : MOE
Sampling Method : Piezo
Sampled By : Northeastern
Date Collected : 10/23/87
Received : 11/18/87
Tested : 11/18/87 at: 1420

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	7	8	10	83
60	0	4	4	4	33
30	0	0	0	5	41
10	0	0	0	1	8
Control	0	0	0	0	0

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : Tested 26 days after collected

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870186

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870185

TEST CONDITIONS

Company : St. Mary's Paper Inc.
Sault Ste. Marie, ONT.
(860304)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : Piez-48, (48)

Laboratory : MOE
Sampling Method : Piezo
Sampled By : Northeastern
Date Collected : 10/23/87
Received : 11/18/87
Tested : 11/18/87 at: 1450

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : Tested 26 days after collected

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870185

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870184

TEST CONDITIONS

Company : St. Mary's Paper Inc.
Sault Ste. Marie, ONT.
(860304)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : Piez-49, (49)

Laboratory : MOE
Sampling Method : Piezo
Sampled By : Northeastern
Date Collected : 10/23/87
Received : 11/18/87
Tested : 11/18/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	4	4	33
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : Tested 27 days after collected

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870184

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870183

TEST CONDITIONS

Company : St. Mary's Paper Inc.
Sault Ste. Marie, ONT.
(860304)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : Piez-50, (50)

Laboratory : MOE
Sampling Method : Piezo
Sampled By : Northeastern
Date Collected : 10/23/87
Received : 11/18/87
Tested : 11/18/87 at: 1415

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY
%				%
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : Tested 26 days after collected

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870183

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870181

TEST CONDITIONS

Company	: St. Mary's Paper Inc. Sault Ste. Marie, ONT. (860304)
Region	: Northeastern
Industry	: Pulp and Paper Mill
Control point	: Piez-51, (51)
Laboratory	: MOE
Sampling Method	: Piezo
Sampled By	: Northeastern
Date Collected	: 10/23/87
Received	: 11/18/87
Tested	: 11/18/87 at: 1430
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	5	5	41
60	0	0	0	0	0
30	0	0	1	1	8
10	0	0	1	1	8
Control	0	0	1	1	8

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : Tested 27 days after collected

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870181

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870102

TEST CONDITIONS

Company : St. Mary's Paper Inc.
Sault Ste. Marie, ONT.
(860304)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : Piez-52, (52)

Laboratory : MOE
Sampling Method : Piezo
Sampled By : Northeastern
Date Collected : 10/23/87
Received : 11/19/87
Tested : 11/19/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	3	4	33
60	0	0	0	4	33
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : Tested 26 days after collected

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870102

TEST CONC.		ELAPSED TIME			
%		00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870004

TEST CONDITIONS

Company : St. Mary's Paper Inc.
Sault Ste. Marie, ONT.
(860304)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 01/14/87
Received : 01/14/87
Tested : 02/09/87 at: 1330

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	02:00	04:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	12	12	100
60	0	0	0	0	0	9	75
30	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : Tested 25 days after collected

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870004

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870011

TEST CONDITIONS

Company : St. Mary's Paper Inc.
Sault Ste. Marie, ONT.
(860304)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 01/28/87
Received : 01/29/87
Tested : 02/19/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	03:00	04:00	24:00	48:00	%
100	0	0	1	4	10	12	100
30	0	0	0	3	12	12	100
10	0	0	0	0	12	5	41
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : 41.0 %

95% fid. limits : 29.6 - 56.8 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02870011

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
5	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870027

TEST CONDITIONS

Company : St. Mary's Paper Inc.
Sault Ste. Marie, ONT.
(860304)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 03/10/87
Received : 03/12/87
Tested : 03/12/87 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00	TOTAL MORTALITY %
100	0	1	6	8	12	12	100
60	0	0	4	6	12	12	100
30	0	0	0	0	12	12	100
10	0	0	0	0	3	8	66
5	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : 7.8 %

95% fid. limits : 5.3 - 11.4 %

Comments : Immobilization within 4 hr conc. > 30%

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02870027

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
5	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
1	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870043

TEST CONDITIONS

Company : St. Mary's Paper Inc.
Sault Ste. Marie, ONT.
(860304)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 05/19/87
Received : 05/22/87
Tested : 05/27/87 at: 1001

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	03:00	04:00	24:00	48:00	%
100	0	0	0	2	11	12	100
60	0	0	0	0	8	10	83
30	0	0	0	1	4	7	58
10	0	0	1	1	1	0	0
Control	0	0	1	1	2	1	8

48 Hour LC50 : 30.3 %

95% fid. limits : 20.6 - 40.2 %

Comments :

SLOPE of Mortality Curve : 4.3
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870043

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870059

TEST CONDITIONS

Company : St. Mary's Paper Inc.
Sault Ste. Marie, ONT.
(860304)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/09/87
Received : 06/09/87
Tested : 06/11/87 at: 1350

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	12	12	100
60	0	0	11	12	100
30	0	0	0	9	75
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 28.5 %

95% fid. limits : 21.8 - 37.2 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02870059

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870063

TEST CONDITIONS

Company : St. Mary's Paper Inc.
Sault Ste. Marie, ONT.
(860304)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/15/87
Received : 06/16/87
Tested : 06/16/87 at: 1415

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	23:00	47:00	%
100	0	0	11	12	100
60	0	0	10	12	100
30	0	0	3	3	25
10	0	0	3	3	25
3	0	0	0	0	0
1	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 24.8 %

95% fid. limits : 0.0 - 100.0 %

Comments :

SLOPE of Mortality Curve : 3.0
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870063

TEST CONC. %		ELAPSED TIME 00:00	01:00	23:00	47:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
3	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
1	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871063

TEST CONDITIONS

Company : St. Mary's Paper Inc.
Sault Ste. Marie, ONT.
(860304)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 06/15/87
Received : 06/16/87
Tested : 06/16/87 at: 1300

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. CME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	12	12	100
60	0	0	11	12	100
30	0	0	6	9	75
10	0	0	0	0	0
Control	0	0	1	1	8

48 Hour LC50 : 28.5 %

95% fid. limits : 21.9 - 37.2 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02871063

TEST CONC.		ELAPSED TIME			
%		00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870088

TEST CONDITIONS

Company : St. Mary's Paper Inc.
Sault Ste. Marie, ONT.
(860304)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/08/87
Received : 07/08/87
Tested : 07/08/87 at: 1430

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	02:00	24:00	48:00	%
100	0	0	3	0	0
60	0	0	1	0	0
30	0	0	0	3	25
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870088

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870108

TEST CONDITIONS

Company : St. Mary's Paper Inc.
Sault Ste. Marie, ONT.
(860304)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/27/87
Received : 07/29/87
Tested : 07/29/87 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY
%				%
100	0	12	12	100
60	0	12	12	100
30	0	10	12	100
10	0	10	12	100
Control	0	3	6	50

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : High control mortality

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870108

TEST CONC.		ELAPSED TIME 00:00	24:00	48:00
%				
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871108

TEST CONDITIONS

Company : St. Mary's Paper Inc.
Sault Ste. Marie, ONT.
(860304)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northeastern
Date Collected : 07/27/87
Received : 07/29/87
Tested : 08/05/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	12	12	100
60	0	2	6	50
30	0	3	2	16
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 51.0 %

95% fid. limits : 38.3 - 65.0 %

Comments :

SLOPE of Mortality Curve : 5.2
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02871108

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870210

TEST CONDITIONS

Company : St. Mary's Paper Inc.
Sault Ste. Marie, ONT.
(860304)
Region : Northeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. P. Figures
Date Collected : 12/01/87
Received : 12/07/87
Tested : 12/09/87 at: 1330

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	12	12	100
60	0	0	12	12	100
30	0	0	9	12	100
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 23.2 %

95% fid. limits : 23.2 - 23.2 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02870210

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02872153

TEST CONDITIONS

Company : Suncor-Sunoco Group
Sarnia, ONT.
(9999512100)
Region : Southwestern
Industry : Petroleum Refinery

Control point : impounding, (440)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/23/87
Received : 09/25/87
Tested : 09/29/87 at: 1520

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02872153

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871153

TEST CONDITIONS

Company : Suncor-Sunoco Group
Sarnia, ONT.
(9999512100)
Region : Southwestern
Industry : Petroleum Refinery

Control point : total effluent, (800)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/23/87
Received : 09/25/87
Tested : 09/30/87 at: 1545

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871153

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870060

TEST CONDITIONS

Company : Teck/Corona Inc.
Marathon, ONT,
(9010000010)
Region : Northwestern
Industry : Metal Mining, Smelting, Refining

Control point : final, (444)

Laboratory : MOE
Sampling Method : grab
Sampled By : Northwestern
Date Collected : 06/09/87
Received : 06/09/87
Tested : 06/12/87 at: 945

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	11	12	100
60	0	0	0	0	2	4	33
30	0	0	0	0	1	1	8
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : 59.4 %

95% fid. limits : 46.1 - 74.1 %

Comments :

SLOPE of Mortality Curve : 6.2
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870060

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870062

TEST CONDITIONS

Company : Toronto STP
Toronto, ONT.
(9339339339)
Region : Central
Industry : Municipal Sewage Treatment Plant

Control point : Chlorinated, (101)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 06/16/87
Received : 06/16/87
Tested : 06/16/87 at: 1145

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	12	12	100
60	0	12	12	100
30	0	12	12	100
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 17.3 %

95% fid. limits : 13.0 - 23.0 %

Comments : 100% mortality in 30% concentration

SLOPE of Mortality Curve : 7.2
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870062

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870075

TEST CONDITIONS

Company : Toronto STP
Toronto, ONT.
(9339339339)
Region : Central
Industry : Municipal Sewage Treatment Plant

Control point : Chlorinated, (101)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 06/24/87
Received : 06/24/87
Tested : 06/25/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870075

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870086

TEST CONDITIONS

Company : Toronto STP
Toronto, ONT.
(9339339339)
Region : Central
Industry : Municipal Sewage Treatment Plant

Control point : Chlorinated, (101)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 07/06/87
Received : 07/07/87
Tested : 07/07/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	12	12	100
60	0	12	12	100
30	0	12	11	91
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 17.1 %

95% fid. limits : 14.3 - 27.7 %

Comments :

SLOPE of Mortality Curve : 4.7
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870086

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02871115

TEST CONDITIONS

Company : Toronto STP
Toronto, ONT.
(9339339339)
Region : Central
Industry : Municipal Sewage Treatment Plant

Control point : Chlorinated, (101)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 08/05/87
Received : 08/06/87
Tested : 08/07/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	2	16
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02871115

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870061

TEST CONDITIONS

Company : Toronto STP
Toronto, ONT.
(9339339339)
Region : Central
Industry : Municipal Sewage Treatment Plant

Control point : prechlorinated effluent, (443)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 06/16/87
Received : 06/16/87
Tested : 06/16/87 at: 1145

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	1	1	8
60	0	1	1	8
30	0	1	1	8
10	0	0	1	8
Control	0	0	1	8

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870061

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870076

TEST CONDITIONS

Company : Toronto STP
Toronto, ONT.
(9339339339)
Region : Central
Industry : Municipal Sewage Treatment Plant

Control point : prechlorinated effluent, (443)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 06/25/87
Received : 06/26/87
Tested : 06/29/87 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	02:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870076

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 0287(085

TEST CONDITIONS

Company : Toronto STP
Toronto, ONT.
(9339339339)
Region : Central
Industry : Municipal Sewage Treatment Plant

Control point : prechlorinated effluent, (443)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 07/06/87
Received : 07/07/87
Tested : 07/07/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY
%				%
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870085

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870115

TEST CONDITIONS

Company : Toronto STP
Toronto, ONT.
(9339339339)
Region : Central
Industry : Municipal Sewage Treatment Plant

Control point : prechlorinated effluent, (443)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 08/05/87
Received : 08/07/87
Tested : 08/10/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870115

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870163

TEST CONDITIONS

Company : Toronto STP
Toronto, ONT.
(9339339339)
Region : Central
Industry : Municipal Sewage Treatment Plant

Control point : prechlorinated effluent, (443)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 10/06/87
Received : 10/07/87
Tested : 11/05/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

INVALID TEST DATA

95% fid. limits : 0.0 - 0.0 %

Comments : Sample tested 30 days after collected

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870163

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870206

TEST CONDITIONS

Company : Toronto STP
Toronto, ONT.
(9339339339)
Region : Central
Industry : Municipal Sewage Treatment Plant

Control point : prechlorinated effluent, (443)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 11/25/87
Received : 11/30/87
Tested : 12/07/87 at: 1330

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	02:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870206

TEST CONC. %		ELAPSED TIME 00:00	02:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870051

TEST CONDITIONS

Company : Toronto STP
Toronto, ONT.
(9339339339)
Region : Central
Industry : Municipal Sewage Treatment Plant

Control point : final effluent, (444)

Laboratory : MOE
Sampling Method : grab
Sampled By : J. Lee
Date Collected : 06/01/87
Received : 06/01/87
Tested : 06/02/87 at: 1400

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870051

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870221

TEST CONDITIONS

Company : Toronto STP
Toronto, ONT.
(9339339339)
Region : Central
Industry : Municipal Sewage Treatment Plant

Control point : final effluent, (444)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Coutts
Date Collected : 12/17/87
Received : 12/17/87
Tested : 12/21/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0
				0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870221

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870036

TEST CONDITIONS

Company : Trent Valley Paperboard Mills
Trenton, ONT.
(1750009)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 04/30/87
Received : 04/30/87
Tested : 05/05/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	02:00	04:10	05:10	24:00	48:00	%
100	0	12	12	12	12	12	100
60	0	6	12	12	12	12	100
30	0	2	8	9	12	11	91
10	0	1	2	2	3	8	66
3	0	0	0	0	2	3	25
1	0	0	0	0	0	1	8
Control	0	0	0	0	0	0	0

48 Hour LC50 : 7.3 %

95% fid. limits : 4.6 - 11.3 %

Comments :

SLOPE of Mortality Curve : 2.6
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870036

TEST CONC. %		ELAPSED TIME 00:00	02:00	04:10	05:10	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
3	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
1	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870048

TEST CONDITIONS

Company : Trent Valley Paperboard Mills
Trenton, ONT.
(1750009)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 05/26/87
Received : 05/29/87
Tested : 06/01/87 at: 1530

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	10	12	100
60	0	1	5	41
30	0	0	1	8
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 56.9 %

95% fid. limits : 44.1 - 70.7 %

Comments :

SLOPE of Mortality Curve : 6.3
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 02870048

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870071

TEST CONDITIONS

Company : Trent Valley Paperboard Mills
Trenton, ONT.
(1750009)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 06/22/87
Received : 06/22/87
Tested : 06/23/87 at: 1330

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	02:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	1	12	12	100
60	0	0	1	11	12	100
30	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

48 Hour LC50 : 60.0 %

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02870071

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	24:00	48:00
100	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
60	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
30	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
10	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0
Control	pH					
	O2 ppm					
	Cond.					
	Temp(C)	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870158

TEST CONDITIONS

Company : Trent Valley Paperboard Mills
Trenton, ONT.
(1750009)
Region : Southeastern
Industry : Pulp and Paper Mill

Control point : final effluent, (445)

Laboratory : MOE
Sampling Method : grab
Sampled By : M. Mueller
Date Collected : 09/28/87
Received : 09/29/87
Tested : 10/05/87 at: 1530

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	12	12	100
60	0	12	12	100
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 42.3 %

95% fid. limits : 0.0 - 0.0 %

Comments : 100% mortality in 60% concentration

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02870158

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870204

TEST CONDITIONS

Company	: Trent Valley Paperboard Mills Trenton, ONT. (1750009)
Region	: Southeastern
Industry	: Pulp and Paper Mill
Control point	: final effluent, (445)
Laboratory	: MOE
Sampling Method	: grab
Sampled By	: B. Mackie
Date Collected	: 11/18/87
Received	: 11/24/87
Tested	: 11/25/87 at: 1400
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	12	12	100
60	0	0	0	5	41
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 61.4 %

95% fid. limits : 49.3 - 76.4 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 02870204

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870000

TEST CONDITIONS

Company	: Trent Valley Paperboard Mills Trenton, ONT. (1750009)
Region	: Southeastern
Industry	: Pulp and Paper Mill
Control point	: final effluent, (445)
Laboratory	: MOE
Sampling Method	: grab
Sampled By	: R. Holland
Date Collected	: 12/17/87
Received	: 12/17/87
Tested	: 12/22/87 at: 1045
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	03:00	24:00	48:00	TOTAL MORTALITY %
100	0	12	12	0	
60	0	9	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0
					0

48 Hour LC50 : 0.0 - 10.0 %

95% fid. limits : 0.0 - 0.0 %

Comments : Immobilized within 1.5 hr in conc. > 30%

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870000

TEST CONC. %		ELAPSED TIME 00:00	03:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870002

TEST CONDITIONS

Company	: Waterloo STP Waterloo, ONT. (9339339335)
Region	: West-central
Industry	: Municipal Sewage Treatment Plant
Control point	: final effluent, (444)
Laboratory	: MOE
Sampling Method	: grab
Sampled By	: J. Lee
Date Collected	: 01/13/87
Received	: 01/13/87
Tested	: 01/29/87 at: 1300
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870002

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870041

TEST CONDITIONS

Company : Waterloo STP
Waterloo, ONT.
(9339339335)
Region : West-central
Industry : Municipal Sewage Treatment Plant

Control point : final effluent, (444)

Laboratory : MOE
Sampling Method : grab
Sampled By : Coutts/Mackett
Date Collected : 05/19/87
Received : 05/19/87
Tested : 05/26/87 at: 1025

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	03:00	04:00	24:00	48:00	%
100	0	0	0	0	0	1	8
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870041

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:00	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870052

TEST CONDITIONS

Company : Waterloo STP
Waterloo, ONT.
(9339339335)
Region : West-central
Industry : Municipal Sewage Treatment Plant

Control point : final effluent, (444)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Coutts
Date Collected : 06/02/87
Received : 06/02/87
Tested : 06/02/87 at: 1400

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	35:40	TOTAL MORTALITY %
100	0	11	12	100
60	0	2	6	50
30	0	1	1	8
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 55.8 %

95% fid. limits : 69.2 - 44.7 %

Comments :

SLOPE of Mortality Curve : 5.7
LC50 Calculated By : probit

TOXICITY TEST PARAMETERS

Sample Number: 02870052

TEST CONC. %		ELAPSED TIME 00:00	24:00	35:40
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870080

TEST CONDITIONS

Company	: Waterloo STP Waterloo, ONT. (9339339335)
Region	: West-central
Industry	: Municipal Sewage Treatment Plant
Control point	: final effluent, (444)
Laboratory	: MOE
Sampling Method	: Grab
Sampled By	: M. Mueller
Date Collected	: 06/30/87
Received	: 07/02/87
Tested	: 07/03/87 at: 1150
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870080

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870116

TEST CONDITIONS

Company	: Waterloo STP Waterloo, ONT. (9339339335)
Region	: West-central
Industry	: Municipal Sewage Treatment Plant
Control point	: final effluent, (444)
Laboratory	: MOE
Sampling Method	: Grab
Sampled By	: M. Mueller
Date Collected	: 08/06/87
Received	: 08/10/87
Tested	: 08/11/87 at: 1100
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
60	0	0	0	0
30	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870116

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
60	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
30	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
10	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0
Control	pH			
	O2 ppm			
	Cond.			
	Temp(C)	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870126

TEST CONDITIONS

Company : Waterloo STP
Waterloo, ONT.
(9339339335)
Region : West-central
Industry : Municipal Sewage Treatment Plant

Control point : final effluent, (444)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Coutts
Date Collected : 08/20/87
Received : 08/20/87
Tested : 09/09/87 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	01:00	03:20	04:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870126

TEST CONC. %		ELAPSED TIME 00:00	01:00	03:20	04:00	24:00	48:00
100	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
60	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
30	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
10	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
Control	pH						
	O2 ppm						
	Cond.						
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0

Ministry of Environment

TOXICITY TEST REPORT Sample: 02870219

TEST CONDITIONS

Company : Waterloo STP
Waterloo, ONT.
(9339339335)
Region : West-central
Industry : Municipal Sewage Treatment Plant

Control point : final effluent, (444)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Coutts
Date Collected : 12/17/87
Received : 12/17/87
Tested : 12/22/87 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	02:30	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0	
60	0	0	0	0	0
30	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0
					0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02870219

TEST CONC. %		ELAPSED TIME 00:00	02:30	24:00	48:00
100	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
60	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
30	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
10	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH				
	O2 ppm				
	Cond.				
	Temp(C)	20.0	20.0	20.0	20.0